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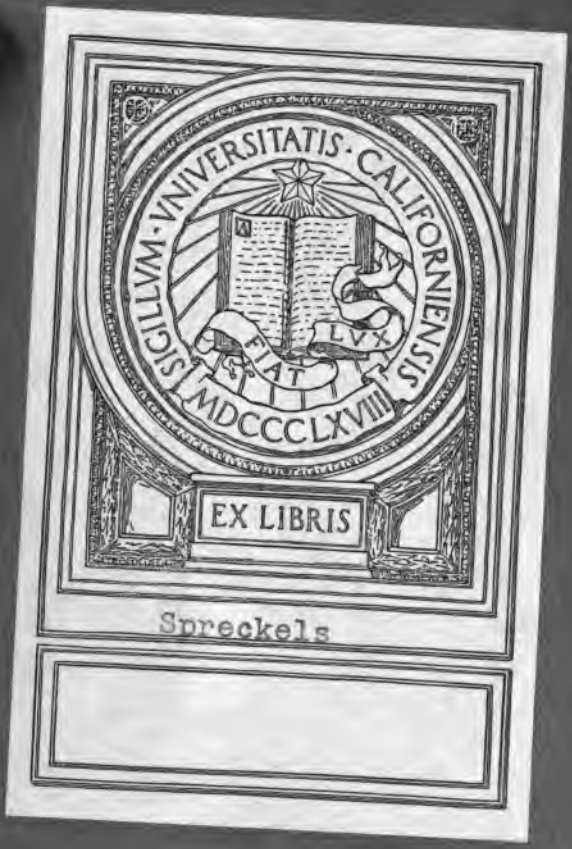

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THE THEORY OF ADVERTISING

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THE THEORY OF ADVERTISING.

A Simple Exposition of
The Principles of Psychology
In Their Relation to
Successful Advertising

By WALTER DILL SCOTT, *Ph.D.*
Director of the Psychological Laboratory of Northwestern University

Boston
Small, Maynard & Company
1904

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Coll

Published October, 1903

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Boston, U.S.A.

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THIS BOOK IS DEDICATED TO

THOMAS BALMER

IN RECOGNITION OF THE SERVICES HE HAS RENDERED
IN ELEVATING THE ETHICAL STANDARDS
OF THE ADVERTISING WORLD
AND IN ASSISTING TO PLACE ADVERTISING
UPON A SCIENTIFIC BASIS

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PREFACE

NEARLY all of the chapters included in this volume were first published serially in *Mahin's Magazine,* under the title of "The Psychology of Advertising." The thanks of the author and of the publishers are due to the publishers of that magazine for permission to reprint these articles in book form, as well as for the use of many of the illustrations which appear herein.

An acknowledgment of courtesy is also due to the *Agate Club* of Chicago, which has generously transferred to the author the copyright of an address originally delivered before their members, which, in modified form, appears as Chapter II of this book.

All of the reprinted chapters have been revised to adapt them to their present use, additional matter has been added to many of them, and new introductory and concluding chapters have been written.

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a Direct command
b Value of Return [illegible]
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I

THE THEORY OF ADVERTISING

SOME good "doctoring" was done when men "picked up" their knowledge of medicine from their practice. To-day the state laws require that every physician shall have a basis of theory for his practical knowledge. He must know the exact chemical constituents of the drugs used. He must know the anatomy and the physiology of the human organism. He must be a theoretical man before he can be a practical one. If the laws did not prohibit it, he might pick up a good deal in actual experience and might do a good deal of excellent work. The state laws, however, will not allow us to run chances with such people.

Theory Demanded

We would not call upon an architect to construct a modern office building unless he knew something of the theory of architecture. We would not call upon a lawyer to defend us before the courts unless he knew something of the theory of law. Some states and cities require teachers to pass examinations on the theory of teaching before they are allowed to give instruction.

In this day and generation we are not afraid of theories, systems, ideals, and imagination. What we do avoid is chance, luck, haphazard

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undertakings, parrot or rule-of-thumbs action, and the like. We may be willing to decide on unimportant things by instinct or by the flipping of a coin, but when it comes to the serious things of life we want to know that we are trusting to something more than mere chance.

Advertising is a serious thing with the business man of to-day. It is estimated that the business men of the United States are spending $600,000,000 a year in printed forms of advertising. Furthermore one authority claims that seventy-five per cent. of all this is unprofitable. Every business man is anxious that no part of these unprofitable advertisements shall fall to his lot. The enormity of the expense, the keenness of competition, and the great liability of failure has awakened the advertising world to the pressing need for some basis of assurance in its hazardous undertakings.

I have attempted to read broadly on the subject of advertising; I have tried to talk with business men — manufacturers, salesmen, publishers, professional advertisers, etc., and in all that I have read, and in all these conversations, I have never seen or heard any reference to anything except psychology which could furnish a stable foundation for a theory of advertising. Nothing else is ever suggested as a possibility. Ordinarily the business man does not

Psychology Alone Suggested

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realize that he means psychology when he says that he "must know his customers' wants — what will catch their attention, what will impress them and lead them to buy," etc. In all these expressions he is saying that he must be a psychologist. He is talking about the minds of his customers, and psychology is nothing but a stubborn and systematic attempt to understand and explain the workings of the minds of these very people. In *Printers' Ink* for October, 1895, appeared the following editorial:

> Probably when we are a little more enlightened, the advertising writer, like the teacher, will study psychology. For, however diverse their occupation may at first sight appear, the advertising writer and the teacher have one great object in common — to influence the human mind. The teacher has a scientific foundation for his work in that direction, but the advertising writer is really also a psychologist. Human nature is a great factor in advertising success, and he who writes advertisements without reference to it is apt to find that he has reckoned without his host.

In *Publicity*, March, 1901, appeared an article which is even more suggestive than the editorial in *Printers' Ink*. The following is a quotation from that article:

> The time is not far away when the advertising writer will find out the inestimable benefits of a knowledge of psychology. The preparation of copy has usually followed the instincts rather than the analyt-

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ical functions. An advertisement has been written to describe the articles which it was wished to place before the reader; a bit of cleverness, an attractive cut, or some other catchy device has been used, with the hope that the hit or miss ratio could be made as favorable as possible.

But the future must needs be full of better methods than these to make advertising advance with the same rapidity as it has during the latter part of the last century. And this will come through a closer knowledge of the psychological composition of the mind. The so-called "students of human nature" will then be called successful psychologists, and the successful advertisers will be likewise termed psychological advertisers.

The mere mention of psychological terms — habit, self, conception, discrimination, association, memory, imagination and perception, reason, emotion, instinct and will — should create a flood of new thought that should appeal to every advanced consumer of advertising space.

These writers merely voiced the sentiment of the leaders in the advertising world, and are but two of many similar quotations which might be given. The application of the principles and methods of psychology to advertising was a need which was felt by all and expressed by many.

No science is regarded as complete. The last word has not yet been said in any realm of human knowledge. During the thousands of years since the dawn of civilization there has been a gradual accumulation of knowledge, but during the last

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few decades the advance in the sciences has been phenomenal. Psychology is no exception to this general statement. Since the establishment of the first psychological laboratory in 1879 the advance in psychology has been very rapid. To-day certain general principles of mind and certain methods of investigating the mind are well established. It behooves the advertiser to take advantage of this scientific knowledge, for it has practical significance for him. The following chapters are an attempt to present the principles and the methods which the modern psychologists have worked out and formulated. At the same time an attempt has been made to show how these principles and methods can be practically applied by the advertiser.

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6

II

ATTENTION

WHAT does the advertiser seek to accomplish by his advertisements? The answers to this question differ merely as to form of expression or point of view. One says: "The aim of advertising is to attract attention and to sell goods." Another statement would be that the purpose of advertising is to attract attention to the goods and to create such a favorable impression for them that the reader will desire to possess them. Whatever the statement may be, this seems certain — one aim of every advertisement is to attract attention. Therefore, the entire problem of attention is one of importance to the advertiser, and an understanding of it is necessary for its wisest application as well as for a correct understanding of advertising.

Important to Advertisers

When we turn to the question of attention, the first thing that impresses us is that our attention is narrow, that we are unable to attend to many things at once. Out of all the multitude of things competing for place in our attention, the great majority is entirely disregarded. At the present time you are receiving impressions of pressure from your chair and from your clothing, impressions of smell from flowers and from smoke,

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impressions of sound from passing vehicles and from your own breathing, impressions of sight from your hand that holds this book and from the table on which the book rests. As I mention them they are noticed one after the other. Before I mentioned them you were totally oblivious of them. You cannot say how many distinct things you can attend to at once. This was formerly a question of frequent debate. Some asserted that we could attend to but one thing at a time, but others, with equal vehemence, insisted that a score of things could be attended to at once. The question has been removed from the realm of mere probability, for it has been investigated according to scientific methods in the psychological laboratories, and definite results have been obtained. Ordinary observers under favorable conditions can attend to about four visual objects at once. "Object" here is used to indicate anything that may be regarded as a single thing. About four letters, four simple pictures, four geometrical figures or easy words are as much as we can see or attend to at once.

Four Things at a Time

As you look at this page the light is reflected to your eyes from each individual word, so one might say that you receive an impression from each of the words on the page, but if you look at the page

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closely you will find that you can attend to but about four words at once.

If, then, there are multitudes of things to be attended to and we are unable to attend to more than four at once, why do we attend to certain things and disregard all the rest? What characteristics must anything have that it may force itself into our attention? Since advertisements are part of the things which may or may not be attended to, we may be more specific and put the question in this form: What must be the characteristics of an advertisement to force it into the attention of the possible customer?

The Question Stated

If I am interested in guns, take up a magazine, look for the advertisements of guns and read them through, my attention is voluntary. If, while looking for guns, something else catches my eye for a moment and I think "that is an advertisement for clothing," then my attention is involuntary. In the first case I sought out the advertisement with a conscious purpose. In the second there was no such conscious purpose, but the advertisement thrust itself upon my attention.

Psychology is the newest of the experimental sciences and the investigations of involuntary attention are as yet far from satisfactory. The complete analysis of it as applied to advertising has to my knowledge never been made. With

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its complete analysis the following six principles will appear:

The first principle is that *the power of any object to force itself into our attention depends on the absence of counter attractions.*

Other things being equal, the probabilities that any particular thing will catch our attention are in proportion to the absence of competing attractions. This may be demonstrated in a specific case as follows: I had a card of convenient size and on it were four letters. This card was exposed to view for one twenty-fifth of a second, and in that time all the four letters were read by the observers. I then added four other letters and exposed the card one twenty-fifth of a second as before. The observers could read but four letters as in the previous trial, but in this exposure there was no certainty that any particular letter would be read. I then added four more letters to the card and exposed it as in the previous trials. The observers were still able to read but four letters. That is to say, up to a certain point all could be seen; when the number of objects (*i. e.*, letters) was doubled, the chances that any particular object would be seen were reduced to fifty per cent. When the number of objects was increased threefold, the chance of any particular object being seen was reduced to thirty-three per cent. If I should place any four particular letters on

Result of an Experiment

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the right-hand page of any magazine, and also the same four letters on the opposite page, and have nothing else on these pages, it is safe to say that the letters would be seen, with more or less attention, in one or both cases by every one who turns over the pages of the magazine. This follows, because at the ordinary reading distance the field of even comparatively distinct vision is smaller than a single page of ordinary magazine size, and as one turns the pages the attention is not wider than the page and therefore the letters have no rivals and would of necessity fill or occupy the attention for an instant of time, or until the page was turned over. If one hundred of these letters were placed on each of the pages, the chances that any particular letter would be seen are greatly reduced.

This seems to indicate that, other things being equal, the full-page advertisement is the "sure-to-be-seen" advertisement, and that the size of an advertisement determines the number of chances it has of being seen.

This principle, which holds for the parts of a page, might not hold for adjoining pages. Thus it might not be to the advantage of an advertisement to be the only advertisement or the only one of a certain class of goods in any periodical. If there were eight advertisements of automobiles on a single page, the casual reader would probably see but one or two of them. If there were eight full-

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page advertisements of automobiles on adjoining pages of the same magazine, even the casual reader would be likely to see them all. Whether each

No 1

of these eight full-page advertisements would be as effective as one would be if it were the only one in the magazine is a question for further consideration and will be taken up at a later time.

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Competitors for Attention

If on a single page there are but few words set in display type, and if these words stand out with no competitors for the attention of the reader, the chances are in favor of any particular person reading this much of the advertisement. Thus, in the advertisement of the Burlington Railroad reproduced herewith (No. 1), the words "Cool off in Colorado" stand out without having to compete with any counter attraction. If this idea causes the reader to stop but for a second he will next see the display "Burlington Route" and then "Send for our Handbook of Colorado." No one of these displays competes with the other, but each assists the other.

In the advertisement of Doctor Slocum, as reproduced herewith (No. 2), there is so much put in display type and in so many styles of type that nothing stands out clearly and distinctly. Each individual display seems to screech at the reader as he turns the page. The result is that the ordinary reader feels confused, and turns away from such a page without any definite idea as to what it is all about. Each display is a counter attraction to each other one, and so the effect of all is weakened.

The second principle is that *the power of any object to attract our attention depends on the intensity of the sensation aroused.*

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The bright headlight of the locomotive and the red lanterns which are used as signals of danger

No. 2

arouse such strong sensations that we simply must see them.

Moving objects produce a stronger sensation than objects at rest. This accounts for the intro-

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duction of all sorts of movement in street advertising.

Certain colors attract attention more than others. Prof. Harlow Gale has made some experiments to determine what the attention value of the different colors is. He has found that red is the color having the greatest attention value, green is the second and black the third. Black on a white background is more effective than white on a black background.

Effect of Colors

Large and heavy types not only occupy a large amount of space and so force attention to themselves by excluding counter attractions, but, in addition to this, they affect the eye and give a strong sensation and thereby attract the attention. Experiments have been made to find the attention value of the different-sized type. It has been found that, within the limits of the experiments, the attention value of display type increases in almost exact proportion to the increase of its size.

The eye is like a photographer's camera. If it is focused for any particular object, all others appear through it to be blurred and indistinct. If I fix my eyes upon an object directly in front of me, all others are seen but dimly. My hand, held to the extreme right or left, is then seen so indistinctly that I cannot count the fingers. Objects that fall under the direct gaze of the eyes make

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stronger visual impressions than those which fall out of the focus. The former ordinarily attract the attention, the latter seldom do. As one turns over the pages of advertisements, those which fall directly within the focus of the eye have the best chance of attracting the attention.

An important question for the advertiser is: Where does the ordinary reader direct his eyes as he turns the pages of a magazine? Does he begin at the front or at the back of the magazine? Does he turn his eyes first to the top or to the middle or to the bottom of the page? Are his eyes turned more to the right or more to the left of the page? These questions have been the subject of frequent discussion, but they never have been subjected to sufficiently extensive investigation.

The third principle is that *the attention value of an object depends upon the contrast it forms to the object presented with it, preceding or following it.*

The contrast produced by a flash of lightning on a dark night, or by the hooting of an owl at midnight, is so strong that the attention is absolutely forced, and there is no one who can disregard them. Novel things and sudden changes of any sort are noticed, while familiar things and gradual changes are hardly noticed at all.

This is a matter of common experience, but has been strikingly illustrated with frogs. The

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following quotation is taken from a recent work of the director of the psychological laboratory at Yale University: "Although a frog jumps readily enough when put in warm water, yet a frog can be boiled without a movement if the water is heated slowly enough. In one experiment the water was heated at the rate of .0036 of a degree Fahrenheit per second; the frog never moved and at the end of two and one-half hours was found dead. He had evidently been boiled without noticing it."

Frog in Warm Water

My explanation of these results is that at any point of time the temperature of water was in such little contrast with the temperature a moment before that the attention of the frog was never attracted to the temperature of the water at all; so the frog was actually boiled to death without becoming aware of the fact!

As we turn the pages of a magazine we do not see each page as an independent unit, but we see it in relation to what has gone before. If it is in marked contrast to the preceding there is a sort of shock felt which is in reality the perception of the contrast. This element is a constant force in drawing the attention. What has been said of the full page is equally true of the parts of it.

In the case of magazine or newspaper advertising, the responsibility for making effective contrasts is shared alike by the individual adver-

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tiser and by the "make-up." Contrasts may be so harmoniously formed that the things contrasted are mutually strengthened, just as is the case when red and green are placed in juxtaposition. The red looks redder and the green looks greener. But if the contrast is incongruous the value of each is impaired. Thus if two musical but mutually discordant tones are sounded together or one after the other, the beauty of each is lost.

No one has been conscious of this principle of contrast to a greater extent than the advertiser.

Contrasts Good and Bad

He has introduced all sorts of things into his advertisements merely to attract attention through contrast: He has inserted his advertisements upside down; he has had the lines of the reading matter run crosswise; he has substituted black background for the ordinary white. The inherent skill of the American advertiser has been made manifest by this ingenuity in devising novel, ever-changing and striking contrasts. Indeed, some have followed this principle too far and have produced novelties and contrasts, but their work has not been successful, because they have violated other equally important principles.

Thus the advertisement of the Burlington Route employs the principle of contrast successfully. The advertisement of Doctor Slocum makes use of the same principle, but the result is nothing short of a botch.

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The three principles as given above are important and are the three methods which the practical advertiser uses most to attract attention. The three which shall be given next are methods which are of almost equal importance, but which are frequently disregarded by the writers of advertisements.

Ease of Comprehension

The fourth principle is that *the power which any object has to attract our attention, or its attention value, depends on the ease with which we are able to comprehend it.*

This principle is one which is often neglected by the advertiser. A few illustrations will help to make it clear. A child in turning over the pages of a book or magazine does not have his attention attracted at all by the printed words. Even the pictures do not attract his attention unless they are in bright colors or represent something which he can understand. The same thing is true with adults. We will turn our attention to nothing unless it speaks to us in terms which we can interpret with comparative ease. It is difficult to comprehend an entirely new thing or function. From this it follows that a new article should be introduced as a modification of a familiar one, or as something performing a well-known function. The pedagogical maxim of always advancing from the known to the unknown is so well established that its

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violation must be regarded as more or less suicidal.

Styles of lettering that are not easily read and cuts that are not easily interpreted are not so attractive as lettering and cuts that are more simple and transparent in their meaning.

Cuts that in themselves are good and lettering that is distinct may be so united and so dimmed by the background that the whole is an indistinct blur. As an example of an advertisement that is good as to individual details but poor as to the entire effect, we have reproduced herewith (No. 3) an advertisement of the Purina Mills. The display of this advertisement is hard to read, and it is, therefore, not so attractive as it would otherwise be.

The name or brand of goods often makes them difficult to advertise. Thus Orangeine does not suggest what the Orangeine Chemical Company would have it suggest. People do not know what it is, and so fail to be attracted by the advertisement simply because it is meaningless to them.

Many advertisers have used certain forms of expression and illustrations which bear no necessary relation to the rest of the advertisement or to the goods advertised. They have been called "irrelevant words" or "irrelevant cuts," as the case might be. Their function is presumably that of attracting attention. As they stand, they are not easily comprehended, and actual experiment

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has shown that they do not attract the attention of one hastily looking at the page of the magazine as often as relevant words or relevant cuts.

No. 3

The advertisement of the Murphy Varnish Company, as reproduced herewith (No. 4), has made use of a form of display which we would call "irrelevant words." This display has nothing

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particular to do with varnish. It could be used equally well with almost any advertisement appearing in magazines to-day. It would, however, be equally poor in any case. It does not increase the reader's knowledge concerning the

WHERE YOU CAN, AND WHERE YOU CANNOT, ECONOMIZE.

A cheaper horse is simply LESS valuable: an ugly flower has no value at all. Cloth not so fine may not wear quite so long: an out-of-style bonnet is unwearable. If you cannot afford mahogany, maple will do; but poor varnish is death to the beauty of anything.

MURPHY VARNISH CO.
FRANKLIN MURPHY, President.
Head Office: Newark, N. J.
Other Offices: Boston, Cleveland, St. Louis, and Chicago.
Factories Newark and Chicago.

No. 4

proposition which the varnish company has to offer, and the ordinary reader would not be likely to be attracted by any such "catch-words" as these.

The advertisers of the White Star Coffee (No. 5) have filled up one-half of their space with the

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picture of a slimy frog. When one is thinking of frogs, he is not in condition to listen to the argu-

No. 5

ments in favor of any coffee. But, aside from such considerations, I believe that there is no proof that such an open attempt to force the attention of the reader is advisable or successful.

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The advertisement of the American Lead Pencil Company, as reproduced herewith (No. 6), has made use of cuts that *illustrate*. Such an illustra-

No. 6

tion is called a relevant cut. The casual reader sees at a glance what this advertisement is all about, and such advertisements attract us instantly.

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The great majority of all advertisements appearing at the present time make use of words in display type which indicate in brief what the entire advertisement is about. Such headings are called relevant words. The picture which tells the story is more easily comprehended than any possible expression in words. This is one reason why the picture is the most attractive form of advertising.

The fifth principle is that *the attention value of an object depends on the number of times it comes before us, or on repetition.*

Repetition

It is no anomaly that children are attracted most by the oft-repeated tale. This is in but apparent contradiction to the third principle. A thing which is in contrast to all other things and yet frequently repeated meets both conditions. The psychological explanation of the value of repetition is somewhat involved, but the fact is seen by every careful observer. The questions concerning repetition as applied to advertising are as yet unsettled.

In the case of goods having an equal sale all the year, if a given advertisement is to appear one hundred times is it best to insert it in one hundred different magazines once, so that the reader can see it in all his periodicals for a few days, or is it better to have the same advertisement appear in one hundred different issues of the same magazine? In other words, are repetitions more effective if they follow rapidly one after the other,

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or if they are separated by a longer period of time?

Another question is this: How much of an advertisement should be repeated? Some advertisements have unchangeable characteristics which are always repeated and which serve to identify all the advertisements of a particular house. Others are completely changed as to all prominent features with every issue, and the casual observer would not notice that the two successive advertisements were for the same goods — he certainly would not notice that they were from the same house. Still other advertisements have certain prominent features which are constantly changing, but which are always recognizable as representing the same firm.

The advertisement which is the same from year to year is lacking in contrast. It is not necessarily ineffective, but it takes time to accomplish its results. The frog that was boiled without noticing it succumbed at last to the slowly rising temperature. The man who sees the same advertisement month after month will at last purchase the goods advertised without ever having paid any particular attention to the advertisement and would be unable to say why he purchased those particular goods.

The advertisement which is changed completely with every issue is lacking in repetition value and would be good only when it is of such a nature

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that a large per cent. of the intended purchasers would read it thoroughly enough to supply the missing links and to unite it to the others of the series.

The advertisement with a constant recognizable feature that varies in detail from time to time allows for both change and repetition, and is to that extent the best advertisement.

This advertisement of a printing press company (No. 7) has, so far as I know, never been

No. 7

changed. It is just the same in all publications in which the firm advertises, and is the same year in and year out. It has doubtless been more or less successful. Would it have been more effective if the copy had been changed?

The two advertisements of the Franklin Mills (Nos. 8 and 9) have nothing in common. No one but a careful reader would know that they were advertisements of the same firm. This same firm has been careful to have the wheat border in all advertisements of Wheatlet. The seal containing the portrait of Franklin is also often present in the advertisements of Wheatlet. Would it not be advisable to retain this wheat border or the

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seal in all advertisements issuing from this firm? If certain readers had become interested in the advertisements of Wheatlet, for instance, and had

No. 8

become familiar with the characteristic seal, they would be attracted by the other advertisements of this firm if they saw the seal down in the corner of the advertisement.

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Very many firms are at the present time changing their copy frequently, but they retain some

No. 9

characteristic feature so that we can recognize the new advertisements as old friends in a new form. Thus the Cream of Wheat advertisements are identified by the genial colored *chef*. I have

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come to like that *chef*, and am attracted by every advertisement in which he appears. If he were left out I would not be so likely to notice the advertisement as I am with him in it. Each of their advertisements is in a sense new and in contrast with all their other advertisements, but this colored *chef* offers just enough of repetition to make the advertisement attractive.

Emotion

The sixth and last principle is that *the attention value of an object depends on the intensity of the feeling aroused.* Attention is not merely a process in which the mind grasps a certain fact, but it is also a process in which we feel. It is either a pleasurable or a painful feeling. That a thing may attract our attention it must not affect us indifferently, but must either please or displease us. At this point the work of the true artist becomes essential. In the ideal advertisement the emotions and sensibilities of the possible customers must be appealed to.

In all advertisements the esthetic feelings may be aroused by at least the harmonious combinations of color and form. Curiosity, pride, sympathy, ambition, and many other feelings and emotions have been awakened by the skillful advertiser. With certain advertisers the desire seems to have been merely to attract attention regardless of the emotion awakened. They have been successful in attracting attention, but their

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advertisements are so obtrusive and repulsive that their value, as a means of selling goods, is inconsiderable.

The man that confines himself to the simple statement of facts may not be subject to the mistakes that befall the man who attempts more difficult things. The photographer presents all the details of a scene, but he does not appeal to the emotions and the heart of the public as the artist does. The work of the photographer may be truer to the facts, but the work of the artist attracts our attention more readily. We do not understand the feelings and emotions of the human breast, and yet it is often advisable to run the risk of attempting appeals to the emotions.

Joys and Sorrows, Both Usable

There are scores of advertisers who attempt to appeal to the joyful emotions. It should be remembered that joy is but one of the emotions. The visitor of an art gallery is at once struck by the frequent appeal to the sadder emotions. It is not at all easy to find in our magazine advertising any appeal or any reference to the more pathetic aspects of life. The following is a reproduction (No. 10) of an advertisement of the Prudential Insurance Company. This advertisement does not appear in recent magazines, yet it is certainly much better than many highly approved advertisements of insurance companies. The skillful advertiser should be able to appeal to

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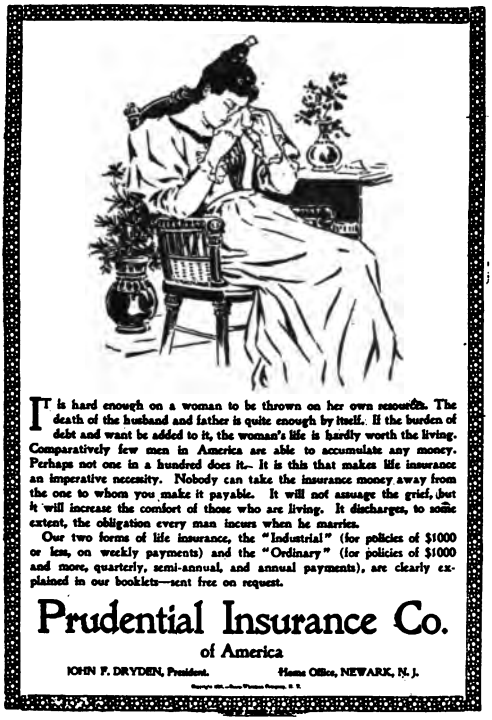
more than one emotion and he should be able to appeal to the one which brings the reader into the



No. 10

attitude of mind which is in keeping with the proposition offered.

The designer of advertisements must be something more than a skilled artisan; he must be an artist and must be able to put soul into his work,

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so that his production will appeal to the sentiment as well as to the intellect of those who are to be influenced by it. The art demands the work of an artist.

Such is in brief the discussion of the six fundamental principles underlying the psychology of involuntary attention in general, and the psychology of involuntary attention as applied to advertising in particular. The purpose of this chapter is to present in an introductory manner the psychology of a part of advertising, *i. e.*, involuntary attention, and with special reference to magazine and newspaper advertising.

Before the psychology of involuntary attention is complete, the following are among the questions that must be investigated:

Questions to be Investigated

For any particular class of advertisements, what is the least possible space for a must-be-seen advertisement?

What is the comparative attention value of different-sized advertisements, for instance, a quarter and a full page advertisement?

What is the comparative attention value of space among classified advertisements and of space among unclassified advertisements, or advertisements of a different class of goods?

Is the additional attention value secured by tinted paper, colored type, and colored cuts sufficient to warrant their increased introduction.

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What size and style of type is the most valuable for attracting attention?

What part of a page and which pages are the most valuable for attention?

What is the comparative attention value of novel and of conventional advertisements?

How does repetition affect the attention value of an advertisement? How complete should the repetition be and how often and how rapidly should the advertisement be repeated to secure the best results?

Is a small advertisement appearing one hundred times a year as good as one ten times as large and appearing ten times in a year?

What are the respective attention values of relevant cuts, relevant words, irrelevant cuts and irrelevant words?

Is a line of display type extending entirely across a page as valuable as the same display in two lines extending half across the page?

What is the relative attention value of representations of the pathetic, humorous, pleasing, and displeasing?

Such is a brief syllabus for future investigation upon involuntary attention as applied to advertising. These questions can probably all be answered, some easily and others only after difficult and extensive investigations. It is quite plain that investigation on these questions would be of the greatest practical value to the advertiser.

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III

ASSOCIATION OF IDEAS

EVERY one has wondered how it happens that a thought or idea has suddenly and unexpectedly entered his mind. Not unfrequently the particular idea had not been entertained for years, — perhaps it had no apparent connection with the present line of thought, — and yet here it is, seemingly unaltered and as distinct as it had been years before.

Mind Apparently Lawless

If anything in the world has the appearance of lawlessness, it certainly is the flight of thought in these minds of ours. We can go from Chicago to Peking; from the present moment to the building of the pyramids or the creation of the universe. We can pick out any object or event included within the borders of space or time. We can go from any one of these objects or events to any other in an instant of time, and whole multitudes of them may be passed in review in scarcely more than a single second. It would be difficult to imagine anything less confined and apparently less subject to laws than the human mind.

Furthermore, no two minds are alike. Men differ as to facial expression in a much less degree than in the manner in which they think.

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However hopeless the task may seem at first sight, it is nevertheless true that from the time of Aristotle down to the present day great thinkers have been engaged in trying to find laws according to which the mind acts. They have not been content with the surprise which they have felt when an idea has unexpectedly entered their minds, but they have gone further and sought for the laws which regulate this sudden appearance. Much progress has been made, and the mind is gradually being recognized as consistent and law-abiding as are all other things in the universe.

In many cases we can readily see why we are thinking of particular things at a specified time. As I walk down a busy street, unless I am oblivious to my surroundings my thought is determined for me by the objects which surround me. My eye is caught by an artistically decorated window in which sporting goods are displayed. My mind is fully occupied for the time with the perception of these articles. The perception of one object is superseded by the perception of another, and in most cases nothing but the present objects are thought of, and this perception of present objects does not recall to my mind any objects which I have seen at other times. It happens, however, that as I see a sweater I think of the sweater which I used to wear, and then of the circumstances which attended its destruction. My mind is next occupied with the perception of clothing, milli-

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nery, etc., as these objects, one after the other, meet the direct gaze of my eyes. At the sight of shoes I am reminded of my need for a new pair; then of the particular make of shoes which I ordinarily wear; then of the pair which I purchased a few months ago and of the circumstances attending the purchase. So I may go on for hours, and in a large part my thoughts will be limited to the perception of objects and events which surround me, but in certain cases (*e. g.*, sweater and shoes) the perception suggests a previous experience. In the case of simple perception the mind seems to act under the ordinary laws of cause and effect. The objects on the street affect me and the perceptions are the result. What my thoughts shall be are determined for me by the external objects which affect my sense organs.

Association Illustrated

Under other circumstances the mind seems to be independent of surrounding objects and to supply the food for thought from former experiences. This is especially true in dreams, sleepless nights, and reveries. Its working is clearly seen in all cases where we are not distracted by external objects and do not attempt to direct the thought along any particular line. Some time ago I read President Roosevelt's decision concerning the Sampson-Schley controversy. After retiring for the night I found that I was thinking of the Rocky Mountains, New Orleans, the Boer war, an Evans-

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ton dining-room, the siege of Peking, the recent action of the dowager empress, the American army and navy, and then of the Sampson-Schley controversy again. The interesting part of each idea tends to suggest, or to recall to the mind some previous experience with which this interesting part had been previously associated. As I thought of the Sampson-Schley controversy, the interesting thing just then was that it had been reviewed by President Roosevelt. The interesting thing about President Roosevelt just then was that he had hunted in the Rockies. The interesting thing about that was that he had ridden a horse. In a similar manner the horse suggested New Orleans, where recent shipments of horses had been made to South Africa. This suggested the Boer war, this a conversation on war by a young lady who had returned to Evanston from China. She suggested Peking; Peking suggested the dowager empress; she suggested her recent actions; these changed conditions suggested the American army and navy; and they suggested Sampson and Schley, and they the recent controversy.

As I walk along the street the action of my mind, even when not confined to bare perceptions, seems different from its action on the sleepless night. As far as the association of ideas is concerned, however, the action is practically identical. In the first case the perceptions of external

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objects (sweater and shoes) are effective in calling up ideas or experiences with which they had formerly been associated. In the second case the ideas are effective in calling up other ideas with which they had formerly been associated.

A Universal Principle

The statement of the law as it applies to both cases and expressed in general terms is: "*Whenever there is in consciousness one element of a previous experience, this one element tends to bring back the entire experience.*" Things thought together or in immediate succession become "associated," or welded together so that when one returns it tends to recall the others. The sight of a shoe suggested the entire "shoe experience," in which I had entered a store, purchased a pair of shoes, carried on a conversation with the proprietor, etc. The thought of President Roosevelt suggested an entire "Roosevelt experience," *i. e.*, President Roosevelt mounted on a horse, attired in a particular costume, amid particular scenery, etc.

But I had had many other "shoe experiences" and many other "President Roosevelt experiences." How did it happen that the shoe suggested the particular shoe experience which it did, and not tennis shoes which I had purchased recently, or the wooden shoes which I had examined years before? Why did not President Roosevelt suggest his trip to see his sick son, or his

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message to Congress, or his literary productions? Each "one element in a previous experience" has been one element in many previous experiences. Which one of these previous experiences will be suggested by the "one element" is the problem which is of interest to us.

If we knew a person's past history completely, and if we knew the present external stimulus and the present condition of his mind, we could tell with some degree of certainty what the next idea would be which is to enter his mind. The laws upon which this certainty is based are the three following:

Three Laws

The first law is that of *habit* based on repetition.

According to this law *the idea next to enter the mind is the one which has habitually been associated with* [the interesting part of] *the one present to the mind.* The sight of a shoe, the printed word "shoe," the spoken word "shoe," and the felt need of a shoe, each calls to my mind this particular make of shoes with which I have been familiar for years. I have perceived a shoe as a "Douglas;" I have seen "Douglas" and "shoe" printed together; I have heard "Douglas" and "shoe" spoken together; I have seen the portrait of Mr. Douglas and a cut of his shoe appearing together; I have met my need for shoes with a "Douglas." All these associations have been frequent and have become so welded together with constant

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use that when shoe enters my mind, it draws its habitual associate, Douglas, with it.

The second law is that of *recency*.

If two things have been recently connected in the mind, when one is thought of again it suggests the other also. One day I read and thought of the exportation of horses from New Orleans. I do not know that horses and New Orleans were ever associated in my mind but this single time, but the next day as I thought of President Roosevelt as mounted on a horse, the thought of horse immediately suggested its recent associate, New Orleans. The recency of this association made it effective. If I had read of this exportation a month before instead of on the preceding day, it is not probable that this associate would have been suggested.

The third law is that of *vividness* or *intensity*.

If my present thought has been associated with a thousand different objects, that one will be suggested with which it has been most vividly associated.

When I thought of the Boer war, war suggested the siege of Peking because the lady who had returned from China described the siege of Peking in such a thrilling manner — war and the siege of Peking were so intensely associated — that when I thought of war, war suggested this particular association. The association between war and Peking was not only vivid, but was also habitual and recent, even if these latter elements do not seem so prominent.

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Psychologists are practically agreed that these are the three special laws of the association of ideas and that the "idea which shall come next" conforms to these three simple formulæ.

The law of habit is very much more important than the other two. When one element has been associated with one experience habitually, with another recently, and with still another vividly, the chances are that the habitual experience (associate) will be recalled. If, however, the one element has been associated with a certain experience habitually, recently, and vividly, this one element will certainly call up this particular experience and none of the multitudes of other experiences with which it had been associated.

Application to Advertising

The application of all this to advertising is direct. The merchant desires so to advertise his goods that his particular brand or article will be the only one suggested whenever his class of goods is thought of.

Let the reader of this article test the truthfulness of the preceding analysis. Test it and see whether the laws of habit, recency, and vividness cover all the cases of association of ideas in your own mind. Think over your possible needs in wearing apparel. Where would you go to supply that need, and what quality or make would you get? As you think of these possible needs what names, brands, or qualities are suggested? Now

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analyze these ideas and see if they do not all conform to the three laws given above. You are probably surprised to see how many of the ideas are those which you have habitually associated with that class of goods. Try the same experiment with articles of food, luxury, investment, etc., and you will be convinced that the advertisements which are the most often seen have a great advantage over those which are less often seen.

Long years ago you formed the habit of putting your coat on in a particular way. Perhaps you put the right sleeve on first, perhaps the left. You have formed the habit of putting it on just one way and you will put it on just that way as long as you live. If you put on the right sleeve first this morning, you will put it on the same way to-morrow morning and every other morning. Of course you could change and put the left sleeve on first, but you won't do it. The mind forms habits of thought and when they are once established they are controlling factors in the action of the mind. As a boy I associated certain names with certain articles of merchandise. I saw a particular soap advertised in various ways. Perhaps it was used in my home — I am not sure about that. This name and soap were so habitually associated in my mind as a boy that when I think of soap this particular soap is the kind I am most likely to think of even to the present time, although it has not been called to my mind

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so often of recent years as other kinds of soap. As far as the association of ideas is concerned, that advertisement is the most effective which is most often thought of in connection with the line of goods advertised, but the associations formed in youth are more effective than those formed in later years. Their effectiveness is lasting and will still have influence as long as the person lives. Hence goods of a constant and recurrent use might well be advertised in home or even children's papers, and the advertisements might be so constructed that they would be appreciated by children.

Whenever I think of photographical instruments I think of one particular make of cameras. If I should feel a need of buying a camera, I would find immediately that I was thinking of this particular make. If I were called upon to recommend a camera, this one would always suggest itself to me first. It is suggested immediately and involuntarily. In my particular case this advertisement of cameras is successful and for me has a decided prestige over all other cameras. If I try to think out the reason why this particular one is suggested whenever I need or think of cameras, it seems to me that it is because it complies with both the laws of habit and vividness. I do not remember to have noticed any advertisement of cameras recently, nor have I had any occasion to think of them for some time. I do

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know, however, that for several years I saw this advertisement repeatedly — therefore it is with me an habitual association. I also remember that at one time I read a booklet published by this company and that it impressed me profoundly — therefore it is for me a vivid association.

If you made the test recommended above, you found that in some cases goods were suggested that were not the ones habitually thought of, but those which had been recently in the mind. Perhaps they had only been brought to your attention this single time. Although the effectiveness of habitual associations is all the more lasting the longer the advertisement is maintained, it gradually diminishes unless the repetition is continued. The recent associates are brought back to the mind with the greatest readiness, and in some cases they prevail over the merely habitual. This emphasizes the necessity of keeping up the repetition to make the habitual most effective, to form the most recent associate, and thus take advantage of the prestige gained by former advertising. Only by frequent advertising are the habitual associations formed and the recent associates constantly made.

You also noticed in your experiments that certain goods were suggested of which you had not recently thought and of which, perhaps, you had thought but once in your life. This one time you had seen a very striking advertisement, or

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had heard the goods highly recommended by a friend, or had seen and used the goods. For instance, one vivid and intense association of hats and Smith was so strong that at the very thought of hats Smith's name presented itself too. You thought of Smith and hats at the same time, and the two thoughts were so vivid that they became welded together by the white heat of the mind, and so when hats are in the mind Smith must come with them. This shows that sometimes doing extraordinary things in advertising may succeed when it is desired to make a great impression and to have the associations formed under this white heat. It may be admitted that this sort of advertising has been successful in some cases. The law is that the mind is in general gradually molded. Lines of thought are developed and not suddenly formed. The advertiser who attempts suddenly to take the world by storm has "to go against nature" and is consequently at a very great disadvantage.

The entire subject of association of ideas may be made clearer and more definite if, in conclusion, its action in another concrete case is given. For years I have seen the statement that the Burlington Railroad goes to Colorado. I have thus thought Burlington and Colorado together, and every time they have entered my mind together they have become more tightly welded together, or associated, until now Colorado is no sooner in

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my mind than I find that Burlington is also there. When I analyze this association to see how it has been formed, I find, in the first place, that for years I have seen the words Burlington and Colorado together. I have thought the two ideas together repeatedly, and the association has become habitual. In the second place, I find that but yesterday I saw the words Burlington and Colorado together and thought the two thoughts together and so the association was recent. In the third place, I remember that some weeks ago I had been attracted by the Burlington advertisement in which a book about Colorado was offered for six cents. This advertisement impressed me, and I gave it a large amount of attention or active thought and so the association became vivid or intense.

If the merchant can make his name or brand to be the habitual, recent, and vivid associate with his class of goods, he will have such a prestige over all others that his success seems assured. The securing of this result should be one of the aims of the wise advertiser.

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IV

SUGGESTION

EVERY thought that we think is probably accompanied by its corresponding movement, or tendency to movement. This has been shown to be true in so many instances that psychologists are inclined to accept it as a working hypothesis for all cases.

We do not first think of bending a finger and then by an exertion of the will, as something different from and added to that thought, put forth an energy which ends by bending the finger. The very thought of bending the finger is in itself impulsive, and will bend the finger, unless hindered by some other contradictory idea. The very thought of the action calls forth the action. This is technically known as "*suggestion.*" The thought is said to suggest the action. This suggested action may be in any of our bodily organs, and may be simple or complex. It may be the raising of the hand or the pronouncing of a word. This relationship has been formulated as the Law of Suggestion in the following terms: "*Every idea of a function tends to call that function into activity, and will do so, unless hindered by a competing idea or physical impediment.*" This statement needs elucidation. Let the function be the bending of

Law of Suggestion

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the first finger of your right hand. Think of bending that finger, concentrate your mind on it, and behold! the finger is bent. You can look at your finger, think of bending it, imagine how it would feel to bend it, and yet keep it straight. What is the difference between the two cases? It seems to me to be simply this: In the second case you kept thinking "not yet, no! keep it straight," and these negative thoughts hindered, or inhibited, the movement. In the first case there was no negative, or inhibitory, thought, so the thought of movement put itself into action immediately.

This conception of the impulsive nature of the mind — that thought universally and necessarily suggests action — is of such fundamental importance that it is worth our while to try and make it clear by examples. I asked my class in psychology to think of the letters "q," "o," and "p" successively. They were not to pronounce the letters, but merely to think of them. As they thought of these letters they involuntarily prepared their lips to pronounce them, and by watching their lips I could tell which one of the letters they were thinking of. Some of the students made no movements of the lips which I could discover, but as most of them did I am almost justified in supposing that all of them made slight movements, but my eye was not keen enough to detect them in all cases. I believe that all were

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able to discover a tendency to move the tongue as they thought of "q." This tendency was marked at the base of the tongue, and could be noticed by all, if the mind was held steadily upon it for a few seconds.

I asked a friend to think of an object in a distant part of a large house. He then blindfolded me, took hold of my hand, and thought of the object and of my going there. He was directed to think of the object "hard" and constantly. I did not know what the object was or where it was concealed, but found no trouble in going to it. My friend was much astonished, believed that it was mind-reading, and refused to admit that he had led me all the way. Every thought tends to put itself into action. The thought of a movement suggests that movement. My friend had thought of the action which he must make to accompany me to the object. He followed this thought involuntarily, and led me although he supposed that I was leading him.

If I suspend my watch directly in front of me by holding the end of the chain with both hands, I find that the watch will swing in the direction of which I am thinking. If I think of it swinging in a circle, it swings in a circle. If I think of it swinging from right to left, and from left to right, it swings in that manner. I try to make no movements with my hands, but find it impossible to keep from it for any length of time

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if I concentrate my attention on the movement. Many persons find that a planchette board or an ouija board will write almost anything of which they think, even if they try to keep the hand from making the movements.

We do that of which we think. Thought has influence over what are ordinarily supposed to be involuntary actions. I have a friend who can increase the rapidity of his heart-beats by merely thinking of it.

No matter what the idea is, it suggests its corresponding action. The action may be stopped by competing ideas, but the tendency, or incipient movement, is there. As I think of moving my finger, but repress the movement by the thought of "straight finger," I notice that my finger quivers and tingles with movement. If I think of the right, I do the right. If I think of evil, I do evil. This is the explanation of the oft-repeated quotation,—

> "Vice is a monster of such frightful mien
> As to be hated needs but to be seen;
> But seen too oft, familiar with her face,
> We first endure, then pity, then embrace."

We do things simply because we happen to think of them. If I should happen to think of pulling my own nose, I would do it, unless the action were repressed by the contradictory idea of how foolish it would be.

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The only reason why every thought does not result in completed action is that we are capable of holding different lines of action before us at the same time. We balance one thought off against another, and so neither has the result that each would have if left to control the field alone.

If we can hold a thought before us for but a second, and if this thought has no rival, it is sure to result in action. What we do, when we want to pursue any line of conduct, is to hold that action clearly in mind and dismiss all impeding or inhibiting thoughts. When we want to influence any one to do a particular thing, we try so to present it to him that it completely fills his mind. We try to get him to think of the action without thinking of any contradictory action. If we want him to go West, we can accomplish the result if we can get him to think of going West without having the ideas of going East or of standing still arise in his mind and check action. If you can get him to think of going to Kansas City over the Chicago & Alton, he will go to Kansas City over the Chicago & Alton, and nothing but a competing idea or physical impediment can stop him. If he is so taken up with the idea of Chicago & Alton that the name of no other means of transportation enters his mind, and if he is so situated that no physical impediment (sickness, lack of money, etc.) hinders him,

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he will start at once to go to the destination thought of and over the route thought of. All we can do is to get the thought into the mind and in an automatic manner the thought will suggest the action.

We have thus far discussed but one aspect of suggestion. We have shown that *actions* are suggested. The second aspect of the topic is that *ideas* also are suggested. The movement of my finger has become so firmly associated with the actual movement that when I think of the movement the actual movement is suggested. In like manner, the thought of Oberammergau and Passion Play have become so associated in my mind that when I think of Oberammergau the Passion Play is suggested immediately. In both cases, and perhaps in all cases, the term *suggestion* carries with it the thought that the process is rather of a reflex, involuntary nature. Actions performed as the result of a conscious, deliberate determination would not be said to be suggested. Ideas attained by a conscious, voluntary process of reasoning would likewise not be said to be suggested. Actions and ideas are suggested when they are forthcoming, independent of any conscious effort or volition on our part. We see some one gaping, and immediately we begin to gape. We are scarcely aware that we have noticed the person gaping at all. The idea is, however, suggested to us, and this thought

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in its turn suggests the action and we suddenly find ourselves gaping. A suggested idea is taken uncritically and suggests its corresponding action without the arousing of competing or inhibiting ideas.

A perfect illustration of suggestion is found in hypnotism. (*Note 1.*) The hypnotiser by word or sign suggests ideas to the subject, who accepts them unhesitatingly. His mind is concentered on that which is suggested to him and, no matter how absurd it may be, it is accepted uncritically and suggests its corresponding actions. Thus a subject is told that his arm is describing a circle and that it will continue this movement indefinitely. The subject accepts the idea of "arm moving in a circle indefinitely." This thought suggests the action and the poor subject swings his arm, and is unable to stop it till the hypnotizer suggests the idea of "arm at rest," when it stops as suddenly as it had begun.

Although the action of suggestion is most evident and complete in the hypnotic state, it is not confined to any abnormal state or states. It is a dominating force in all the waking hours of the day and all the dreaming hours of the night. All men and probably all the lower animals are suggestible. The suggestibility of animals is clearly shown in stampedes. One animal becomes frightened and starts to escape. The others see the one fleeing, and the idea of flight and escaping

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from danger is suggested to them by this action. The suggestion is so overpowering that in many cases the most sedate and steady animals go wild with fright. The following account of a stampede of Russian cavalry is quoted from the *London Times:* "On the second night of the campaign an unlucky accident occurred . . . . A regiment of the Empress' Cuirassiers of the guard, nine hundred strong . . . had arrived at their cantonments. One of the squadron of horses became alarmed, broke away, was followed by the next squadron, and, a panic seizing them all, in one instant the whole nine hundred fled in wild disorder. . . . When I tell you that some of the horses were not recovered till they had gone one hundred and twenty miles into Finland, you may imagine what the panic was. The second remarkable thing is the way that some of them were stopped. In one solid mass they dashed on for miles, and then came directly, at right angles, on a river. In front of them was a bridge, but on the other side of the bridge was a sort of *tête de pont* and a small picket of cavalry. The horse which led would not face the bridge, seeing the cavalry at the other end, but turned to one side, dashed into the stream, and the whole nine hundred horses swam the river together. As they emerged and flew wildly on, the commander of the picket bethought him of a *ruse*, and ordered the bugler to blow the *appel*. This is always

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blown when the horses are going to be fed; . . . all the old horses pricked up their ears, wavered, stopped, paused, turned round, and trotted back. . . . This severed the mass . . . . the rest was broken up."

If anything could be more ludicrous and yet more awful than such a stampede among dumb brutes, it is a stampede among intelligent business men, when making a run on a bank. A few men start to draw out their money, the report spreads, and others follow the example. At first the fear is but slight, but it is of the accumulative sort, for each person suggests the fear to each other. Each tries to get ahead of the other in taking out his deposit. Jamming and crowding tends but to increase the fear, until the steady men are changed to creatures not so much unlike the panic-stricken horses. In the midst of this excitement some wealthy gentleman is seen depositing his money. Thereupon the idea of security instead of fright has a chance to be suggested. The attention is turned for a moment from the crowd struggling after their money to the depositor, and this moment is sufficient to turn the tide. They suddenly realize that their money is safe and that they can get it whenever they want it, so are perfectly content to have it remain in the bank.

Social Suggestion

An extreme case of social suggestion is reported

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by Sidis: "About the year 1634 the Dutch became suddenly possessed with a mania for tulips. The ordinary industry of the country was neglected, and the population, even to the lowest dregs, embarked in the tulip trade. The tulip rapidly rose in value, and when the mania was in full swing some daring speculators invested as much as one hundred thousand florins in the purchase of forty roots. The bulbs were as precious as diamonds; they were sold by their weight in perits, a weight less than a grain.

"An insane mania of speculation in tulips seized upon the minds of the Dutch. Regular marts for the sale of roots were established in all the large towns of Holland — in Amsterdam, Rotterdam, Haarlem, Leyden, Alkmar. The stock jobbers dealt largely in tulips, and their profits were enormous. The epidemic of tulipomania raged with intense fury, the enthusiam of speculation filled every heart, and confidence was at its height. A golden bait hung temptingly out before the people, and one after the other they rushed to the tulip markets, like flies around a honey pot. Every one imagined that the passion for tulips would last forever, and that the wealthy from every part of the world would send to Holland and pay whatever prices were asked for them. The riches of Europe would be concentrated on the shores of Zuyder Zee. Nobles, citizens, farmers, mechanics, seamen, footmen,

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maid servants, chimney sweeps, and old-clothes women dabbled in tulips. Houses and lands were offered for sale at ruinously low prices, or assigned in payment for bargains made in the tulip market. So contagious was the epidemic that foreigners became smitten with the same frenzy and money poured into Holland from all directions.

"This speculative mania did not last long; social suggestion began to work in the opposite direction, and a universal panic suddenly seized on the minds of the Dutch. Instead of buying, every one was trying to sell. Tulips fell below their normal value. Thousands of merchants were utterly ruined, and a cry of lamentation arose in the land."

There is an oft-told tale of a mother who, upon leaving her children, warned them that, whatever they did, they should not put beans in their noses. When the mother returned she was much surprised to find all their noses full of beans. They never would have thought of such a thing had the mother not suggested it. The thought of "beans in the nose" haunted them, and the thought led to its appropriate action.

We do things that we don't want to, simply because the thought of it has been suggested to us, and we feel compelled to carry it out. As one stands on a tower at a great height, or near to a rapidly moving train, the thought comes to one of how awful it would be to fall from the building

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or to get under the wheels of the moving train. The thought is suggested by the awfulness of the situation. Many people find that under these circumstances they have an almost irresistible impulse to spring from the tower or under the wheels of the train. The idea "falling from this great height" or "getting under the wheels of the train" possesses them for the time and by suggestion calls forth the action thought of.

The suggested action may be of a criminal nature and yet it seems that under certain circumstances it is irresistible. We have all noticed that, if any crime is widely discussed in the papers, there is likely to be a whole harvest of similar crimes. This tendency has been noticed, and is greatly feared by all right-minded people. It seems, however, that the real nature of the fact is not understood. The kidnapping of Edward Cudahy was published all over the country. It was not infrequently remarked that the crime should not be published, because it had been so profitable that many would be influenced by the profitableness, and attempt to repeat it. If I am not mistaken, the harvest of kidnapping has not been as great as was expected. The cases that have been brought to light have been committed not because the criminal reasoned it out and concluded that because some one else had been successful, he would be successful too; but rather it was done simply because the thought of kidnap-

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ping was suggested, and the suggestion of almost any hideous or unsuccessful crime would have had as great a harvest.

The reason for the extreme working of suggestion in the examples given is apparent in each case. In the stampede each horse suggested the idea of fright to every other horse, so each one received the suggestion of fright from every other one. The suggestion was so all-pervading that no inhibiting idea had a chance to enter the mind. There was really no reason for the fright, and when the bugle sounded the older horses received the suggestion of "assembling for food." This latter thought, having once entered the mind of the horses, displaced the idea of flight, and so saved some of them from the panic.

When the tulip mania invaded Holland, the suggestion to invest in tulips was given by every one. Every one's friends and acquaintances were buying tulips. "Buy tulips" was heard in the home, read in the papers, cried in the market place, and acted upon by people everywhere. The thought was "in the air," and infected every citizen of the nation. Other and inhibiting, thoughts were kept out of the mind and this one ruled the field alone.

Man has been called the reasoning animal, but he could with greater truthfulness be called the creature of suggestion. He is reasonable, but he is to a greater extent suggestible.

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The advertiser must deal with man as he is and not with some ideal being. If man is subject to reason and also to suggestion, we must recognize the fact and adapt our argument to each side of his nature or to that side which will best suit our purpose. If men are reasonable and are induced to act after careful consideration of arguments, then we must give attention to the formation of cogent arguments. If men are suggestible, we must give the suggestions to action by illustrations, affirmations, repetitions, and direct commands, or by any other means which wisdom and experience may discover.

Note 1. — HYPNOTISM.

The word "hypnotism" is derived from the Greek word meaning sleep, and is to be regarded as indicating an artificially produced sleep. In a normal sleep we can dream, awaken at a given signal, and even walk or carry on a conversation. In artificially produced sleep, which is called hypnotism, we do similar things. If, when asleep, the bedclothes fall off me, I dream that I am in a snowstorm. If, when under artificial sleep, the hypnotizer tells me that I am cold, I believe it, and begin to shiver. In the natural sleep the suggestion of cold was given by the temperature of the room. In the artificial sleep the suggestion was given by the word of the hypnotizer. One is as wonderful as the other and no more so. The word "hypnotism" as used in the preceding article is to be thought of as freed from all idea of anything mysterious, uncanny, or peculiar. It is probable that every right-minded person can both be hypnotized and hypnotize others

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but it is quite certain that people cannot be hypnotized against their will. In explaining the working of hypnotism it is not necessary to assume the introduction of any new sense, power, or faculty. There is no unconscious or unusual impartation of knowledge or power from the hypnotizer to the subject. The subject receives all the suggestions through the sense of sight, or some one or more of the senses, and in a perfectly normal manner.

A few centuries ago quacks and fakirs used dreams as a form of divination, which they called *oneiromancy*, Dreams were then supposed to be something so mysterious and ominous that it would have been almost impossible for a man to speak of dreams without being misunderstood, unless he conformed to the prevailing view. In a similar manner it is almost impossible to speak of hypnotism without being misunderstood. The difference between dreams (as understood to-day) and oneiromancy is not greater than the difference between hypnotism as understood by the man of science and as understood by the charlatan.

A satisfactory discussion of hypnotism may be found in the following references:

The Nation, New York, July 28 and August 11, 1892.

"Hypnotism," Johnson's Universal Encyclopedia, 1894.

Science, February 27, 1891.

H. Bernheim, "Suggestive Therapeutics," 1899.

J. Mark Baldwin, "Mental Development" (pages 104–169), 1895.

Albert Moll, "Hypnotism," 1890.

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V

THE DIRECT COMMAND

"SIMON says thumbs up" used to be a favorite game with children. In this game one person is "it." He turns his thumbs up and calls out, "Simon says, 'Thumbs up!'" At this command all must obey and turn thumbs up. The one who is "it" next calls out, "Simon says, 'Thumbs down!'" This is the signal for all to turn the thumbs down. If, however, the one who is "it" fails to say "Simon says," he must not be obeyed, and the one who does obey becomes "it" himself. "Simon says" is the *reason* for obedience, but obedience under any other condition is, in a mild way, punishable. Those of us who have played the game remember that it was impossible for us not to obey the command, even when the "Simon says" was left out. We were commanded to turn our thumbs up or down, as the case might be, and we obeyed before we thought whether the *reason* for obeying, namely, "Simon says," was given or not.

Extreme Cases

When in our early "teens," my brother and I slept in a room which was not heated. One cold winter night my brother went to bed first, succeeded in warming his side of the bed, and went

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to sleep. About an hour afterward, I came to bed and was appreciating the fact that the temperature of the room was below zero, when the thought struck me to play a trick on my brother. I merely said, "John, get over on the other side of the bed." He obeyed immediately and rolled over to the cold side of the bed. I began to laugh and John awoke. It is needless to say what happened. He knew that he had obeyed me and had done what he did not want to do, and the very thought angered him.

When a person is being hypnotized and is told that he cannot and must not open his eyes, he frequently struggles against the suggestion, but at last succumbs to it. Certain persons are so refractory that they struggle till they "awaken" themselves, unless they are well under the control of the hypnotist. All persons, in all stages of hypnosis, obey the commands of the hypnotist, or are compelled to struggle to keep from it. The natural and easy thing for them to do is to obey; the unnatural and difficult thing is to keep from obeying.

The school-teacher commands a room full of mischievous children and they obey her, although she could not convince them with reason or compel them with force. They obey simply because they are commanded.

The demagogue uses more than flattery, threats and bribes; he commands his followers absolutely

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as to what they shall do and what they shall not do. He not only says, "Smith is your friend and Jones your enemy," but he gives the command, "Vote for Smith."

When certain commands have been obeyed habitually, they attain such a power over our wills that we can scarcely keep from obeying. "There is a story," says Professor Huxley, "which is credible enough, though it may not be true, of a practical joker who, seeing a discharged veteran carrying home his dinner, suddenly called out, 'Attention!' whereupon the man instantly brought his hands down, and lost his mutton and potatoes in the gutter."

This soldier had obeyed the command until obedience had become almost automatic. He obeyed immediately and without any consideration whatever.

In the game alluded to ("Simon says 'thumbs up'"), in sleep, in hypnotism, and in the cases of the teacher, the demagogue, and the soldier, we have extreme cases. Here the force of the command is so overpowering that obedience is involuntary. These illustrations are useful in indicating the real nature of a command, and in showing how effective it may be when not hindered by competing thoughts. Although commands do not ordinarily secure involuntary obedience, there is a strong tendency in us all to obey them. We have probably all felt ashamed

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of ourselves for obeying and doing things merely because we were commanded to do so. Stubbornness is the exception and obedience the rule.

Action Analyzed

It often happens that those things which are apparently the most simple are, in fact, the most difficult to comprehend. What could be more simple than the raising of your hand or the turning of your head? If you attempt to analyze the process involved in the simplest movement you find that it is too difficult for your comprehension. We do know something of the psychology of movement, but much is yet to be found out about it. When I want to raise my hand, I do not say, "Hand, come up!" but I know of no way to express what goes on in my mind better than that. I do think of the movement and there is in the thought itself something akin to a command. When I turn my thumbs up, I think of my thumbs turning up, and the thought is the command which I give to my thumbs and which they obey. If the thought is not hindered by a competing thought, — if it is allowed to take its own course, — it will be effective in raising the thumbs.

In a direct command one person originates the thought and suggests it to another person. Thus in "Simon says 'thumbs up,'" I suggest the thought of "thumbs up" to another person. The thought of "thumbs up" enters his mind — is suggested

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to him, — and unless he hinders the action of the thought it will be obeyed, and up will come his thumbs. One advantage of the direct command is that it suggests a thought in such a way that it will bring forth the action suggested unless hindered by a previous suggestion or by an action originated by the person himself. It is, of course, true that many actions are suggested which are not carried out, because the impelling power of the thought is not sufficiently strong. The impelling power of a thought is in direct proportion to the amount of attention which it secures; and so the impelling power of a command is also in direct proportion to the amount of attention which it receives. If a direct command could occupy the attention completely, it would be the best possible form of argumentation, because it puts the thought in such a shape that its impelling nature will secure the desired results. *The command relieves the one commanded from the trouble of making up his mind. It makes up his mind for him, and so makes action easy.*

Advantages of Direct Command

A command is a direct suggestion, and as such has inherent value. It is the shortest and simplest form of language, and is the easiest to be understood. It bears with it authority and weight by expressing action explicitly and distinctly. It calls for immediate action and meets

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with ready response. Mankind as a whole is influenced more by commands than by logical processes of thought, for, as previously stated, we are suggestible rather than reasonable. The command, if not obtrusive, is of such a nature that it has its legitimate uses in advertisements and should not be discarded, as has been recently asserted. We are not only suggestible and obedient, but we are also obstreperous, obstinate, stubborn, and self-willed. We delight in following our own sweet wills and object to having any one dictate to us. There must, then, be certain limitations put on the use of commands. They must be used with such discretion that they do not arouse opposition; otherwise we would refuse obedience, even if it were to our best interests to obey.

Caution Necessary

Although we do obey commands, we are unwilling to admit it. We like to think of ourselves as independent beings, who act only because it is the reasonable thing to do and because we want to. It is very difficult for us to analyze our actions and to give the motives which have prompted us to do many of the things that we have done. We act from habit, imitation, insufficient reason, or because the idea of the action has been suggested. It is but rarely that the ordinary person weighs all the evidence before he acts. After he has acted, he may think over the

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motives which *might* have prompted him, and may even deceive himself into thinking that he acted because he had weighed the evidence, when, in fact, no such motives entered his mind at the time of action.

I have frequently suggested to persons that they should do a certain thing. At the time they have refused to do it. The idea was, however, implanted in their minds. Later they have done exactly what I had previously suggested. They had forgotten who had suggested the idea, but the idea itself was retained, so they were perfectly honest in supposing that they had originated the thought, and that they had performed the deed independently. No one would be willing to admit that he had used Pears' Soap simply because he had read the command, "Use Pears' Soap." It is, however, quite probable that many persons have used Pears' Soap for no other reason. The idea of using the soap was suggested to them in that form. They afterward forgot where they had received the thought, and believed they had originated it themselves.

We are perfectly willing to obey as long as we are unconscious of the fact. But let any one see that he has been commanded and his attitude is changed; he becomes obstinate instead of pliant. Every wise leader of men recognizes this fact. He does not cease to command, but he covers his commands in such a way that each

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one thinks that he is doing just what he wants to, and that he is not following commands at all.

Choice of Words

The correct wording of the command is a matter of importance, yet it is difficult to formulate any rules or principles to guide us here. Such an expression as "Use Pears' Soap" is not as suggestive as "Let the Gold Dust twins do your work." The first is a bald command and as such has a certain value, but the second has the added value of supplying, or implying, a reason for obedience. It is implied that the Gold Dust twins will save you labor, and so the command is supplemented by an appeal to a personal interest.

Furthermore, this latter command is worded in such a way that it is hardly recognized as a command at all, and so would not beget opposition on the part of any one. As a further proof of the importance, but difficulty, of clothing the command in the best possible form, take the "catch-lines" of four advertisements of advertising schools as they appear in the magazines, which are reproduced upon the following page:

The first, "Be an ad-writer," is short, but rather bald and indefinite. The second, "Learn to be an ad-writer," suggests that I should *become* something, and implies that, by a process of learning in connection with their school, this end could be attained. The third, "Learn to write adver-

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Be an Ad-Writer

Learn to be an Ad Writer

LEARN TO WRITE ADVERTISEMENTS

Advertising Writing Taught

No. 1

tisements," suggests that I should learn *to do* something, and implies that I could learn this by a course of instruction at their school. Personally, learning *to do* seems more definite than learning *to become*, but it is quite possible that it would impress others differently. The fourth, "Advertising writing taught," is not a command, and seems to me to be much inferior to the preceding ones. It supplies me with certain information, but does not help me to make up my mind to take the course at their school. It informs me of the fact that they teach advertising, but has nothing to say about action on my part. To have action in another person suggested is not so impressive as it is to have my own action, or action on my part, suggested. The direct per-

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sonal element is lacking in the last, which is present in the first three.

A further criticism might be made of the first two headlines, in that they have made use of the expression "ad," which is a technical term, and would not be understood by certain persons who might be appealed to by the term when written out in full.

As the young man reads over these four displays his attention will certainly be drawn more forcibly by the first three than by the last one. It might be questionable, however, which one of the first three would appeal most to him. "Learn to write advertisements" appeals to me most strongly, and would probably appeal to more persons than any of the others.

The value of the form of expression in the headlines is clearly seen when we read over the commands which were used as display in *Success* for March, 1902. Some are good and some are poor, as will be recognized by every one who reads the list. Taking them in the order in which they appeared, they are the following:

"Learn to write advertisements."
"Exercise at home."
"Make your own lace."
"Learn bookkeeping."
"Be your own boss."
"Deal direct with the maker."
"Send no money."

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"Furnish your house."
"Stop stammering."
"Learn telegraphy at home."
"Learn engraving."
"Be an ad-writer."
"Learn in three months."
"Study law."
"Learn bookkeeping."
"Learn the art science of photography."
"Learn the best shorthand."
"Study law at home."
"Study medicine at home."
"Let us start you."
"Learn proofreading."
"Be a writer."
"Be a trained nurse."
"Save rewriting."
"Teach yourself music."
"Do not stammer."
"Don't shout."
"Learn bookkeeping."
"Learn to be an ad-writer."
"Get away from clerical drudgery."
"Let the Gold Dust Twins do your work."
"Simply press this."
"Don't set hens."
"Sleep on it thirty nights free."

As we see from the examples given above, the value of a command is dependent upon the way in which it is expressed.

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Commands and Commanders

Another factor of even greater importance than the verbal expression is the personality of the one giving the command. The spoken command is enforced by the personality of the speaker to an extent impossible in written commands. The difference is, however, not so great as might be supposed. Van Dyke expressed a truth when he said, "Help me to deal very honestly with words and people, for they are both alive." The person who can move men by spoken words can move them with written words. This is so true that many have prophesied that the press would render the preacher and the orator useless. The printed page is a living force which is more appreciated to-day than ever before. There are men who are obeyed whether they speak or write, whether they are at the head of a regiment or in the privacy of their own homes, whether they are addressing their employees in person or presenting certain lines of action to the public by means of printed advertisements. Certain persons can command us and we obey readily, but if the same commands were given by other persons, we would regard it as presumptuous and refuse obedience. A firm that is just beginning its first advertising campaign does not secure as much attention to its advertisements as the older firms. Furthermore, reliable firms which are well established and well known through adver-

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tising could give commands with impunity which would injure a new or unknown firm.

Persons who are used to obeying take obedience as a matter of course and obey almost from second nature or instinct. Those who are not used to being commanded are more inclined to resent the attempt and so refuse to obey, even if the command is in accord with their interests, and if they had at first been at the very point of obeying. A form of expression which would prove highly successful with one class of society might fail with another class. Commands would have a greater efficiency in cheap than in higher-priced periodicals, because the poorer classes are more in the habit of obeying commands. They are more in the habit of doing things that are directly suggested to them. All classes of society are moved by a direct command if it is properly worded, and if it appears in their favorite or most highly appreciated publication.

The function of the direct command in advertisements is twofold — *to attract attention* and *to beget immediate action.*

Attracting Attention

There is nothing which attracts the attention so much as movement or action. When we want to attract the attention of a friend, we wave to him instinctively. We know that he will see the wave of the hand or of the handkerchief when he would not notice us at all apart from such move-

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ments. Our eyes are so constructed that we can distinguish a movement of an object before we are able to distinguish the object itself. Movements please and attract us in whatever form they may be presented. A shop window that has in it a live animal or anything else that moves will attract the attention of the pedestrian as he passes by. A command ordinarily calls for action. As we read a command we think of the action suggested and it attracts our attention in much the same way that actual movements do. In the first case we see with the imagination what we see in the second case with the sense of sight.

A command in good display type at the beginning of an advertisement may express in a few words the intent of the entire advertisement. It expresses it in such a living, moving manner that it attracts our attention and makes us feel in sympathy with it, so that we feel like doing what is suggested at once. This tendency to action on our part brings us into sympathetic, personal relation with the advertisement, and so gets us interested enough in the advertisement to start us to reading it. The argument should be so constructed that it brings us into closer relationship with the proposition offered. It should take us into the confidence of the firm and make us feel that the firm back of the advertisement can be trusted. We then feel in sympathy with the offer made by the firm, our self-

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will is suspended, and we are in a condition to do what is suggested. The argument may have been extensive, the illustrations may have been interesting and suggestive, but now what is wanted is immediate action. The advertisement should focus at this point. An attempt should be made to hold our attention to what is desired of us. The value of a direct command at this point should not be overlooked, as it expresses in a few words and in living form all that the advertisement has desired to bring about. It sums up the entire argument and puts it before us in the form of a direct suggestion to action.

Outdoor advertising must of necessity be very brief and very suggestive. There is no opportunity to present extensive arguments, yet something must be done to attract attention and to beget immediate action. Direct affirmation as to the value of the goods offered may, in general, be the most effective form of expression, but the direct command could be used with profit because of its superior value in attracting attention and in begetting immediate action.

The above chapter on "The Direct Command" as a form of argumentation appeared in substantially the present form in *Mahin's Magazine*. Soon after its publication the Editor received a letter from the Franklin Mills Company, saying

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that they were going "to try out the theory" in their advertising. Some time later the following letter was received, stating the results of their experiment with the advertisement reproduced herewith (No. 2):

No. 2

We wish to say that our February advertisement, embodying "the direct command" advised by Professor Scott, is bringing far greater returns than any advertisement we have ever before published, and this is

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surprising in the face of the fact that the public are overloaded with free samples of hundreds of cereals, and are so confused thereby that they hardly know what they want.

Another instance of the successful application of this principle appeared in a recent issue of *Printers' Ink*. It is entitled, "A Story of Progress," and gives the history of the wonderful growth of the *Delineator:*

Then advertising was used in dailies and magazines throughout the country. Bill-boards were also utilized for a brief period, chiefly to spread the well-known catch phrase, "Just get the *Delineator*." This phrase originated with Mr. Thayer, who, in speaking about it, said:

"I had tried more than a year to hit upon a suitable phrase, but nothing would come to me. One day I read an article by Professor Scott in *Mahin's Magazine*, in which he showed that if the words 'Cut this coupon out and mail it to-day' were used instead of 'Use this coupon,' there would be a larger number of replies. It is his theory that people will follow a definite direction of this sort, and the theory appealed to me. So I formulated my phrase in the belief that its suggestion would be followed, especially by women. Results have proved that it is an effective phrase. To my own personal knowledge the catch line has tantalized even men until they bought copies to see the publication for themselves."

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VI (Campbell)

THE PSYCHOLOGICAL VALUE OF THE RETURN COUPON

THE return coupon, which is the product of a long evolution in which necessity and practical experience were the prime moving factors, has of recent years been greatly improved by those who have been able to analyze it and to appreciate its possibilities. Before the days of the coupon, the advertiser met with great difficulty in trying to keep tab on the various publications in which he advertised. The "Please mention this magazine" was frequently disregarded, and so the idea was conceived of having something returned to the advertiser which would indicate the publication in which the sender had seen the advertisement. At first it was the whole advertisement which was to be returned, and we find at the end of some of the old advertisements this statement, "Please cut this advertisement out," etc. Then it was conceived that it was not necessary to return the entire advertisement, but merely a blank for the name and address, and so the coupon was evolved.

Evolution of the Coupon

The return coupon was, then, in the beginning a keying device and was not intended to have any value as a means of securing replies. It

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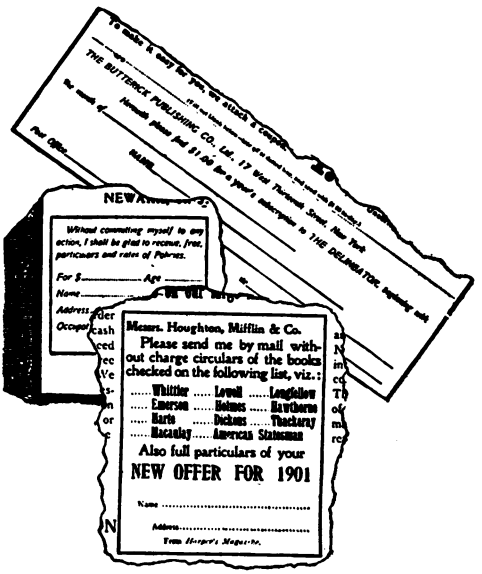
was not to assist the reader to answer the advertisement, but was intended as an assistance to the advertiser in keeping tab on the various publications in which he advertised.



No. 1.

Later it was discovered that the coupon had a greater value than had been supposed — that it was in itself a strong argument and that its value was therefore psychological. The coupon appeals directly to the reader and induces more to answer the advertisement than would do so if the coupon were not there.

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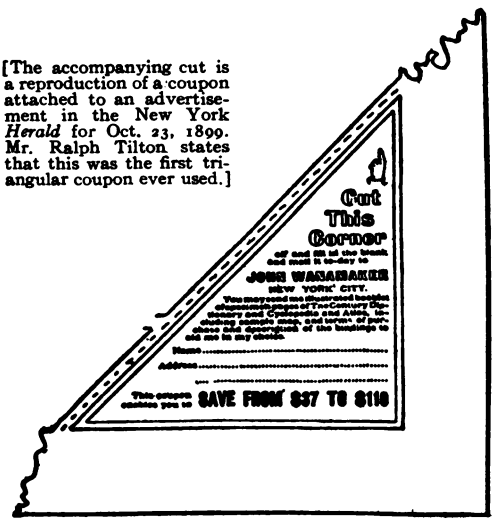
Attention Value

One psychological value of the return coupon is that *it attracts attention.* In their original form these coupons (No. 1) were something different from anything that had previously appeared in advertisements, and attracted attention by way of contrast to ordinary advertisements. They also attracted attention because the ruled blank

[The accompanying cut is a reproduction of a coupon attached to an advertisement in the New York *Herald* for Oct. 23, 1899. Mr. Ralph Tilton states that this was the first triangular coupon ever used.]



No. 2.

lines and open spaces were in contrast with the rest of the advertisement. The coupon is so familiar now that it does not offer so strong a contrast to other advertisements as formerly, but is still in contrast to the rest of the advertise-

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ment in which it is contained. To make this latter contrast stronger, the whole advertisement, as well as the coupon itself, has been greatly modified. The chief alteration was in the coupon, which was changed from the square or oblong to the triangle (No. 2). All the lines of reading matter are horizontal, but the little three-cornered coupon has one or more oblique lines, and the oblique lines run in different directions. This brings it into contrast with the rest of the advertisement.

I asked a large group of persons to think of some number. Very many more of them thought of three than of any other number. I have asked other groups to think of some geometrical figure, and more think of a triangle than of any other figure. I have exposed, for a very short interval of time, various geometrical figures, and the triangle catches their attention more than any other figure. The number three and a figure with three sides possess a peculiar interest for us. It seems, then, that the triangle is more attractive than a square, an oblong, or parallel lines, and so it attracts our attention to itself and indirectly to the advertisement in which it is contained. The shape of the entire advertisement and particularly the shape of the border has been changed to make the contrast with the three-cornered coupon greater. By certain leading advertisers the border has been constructed of figured designs com-

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posed of broken curved lines, or of continuous curved lines, or else the border has been discarded entirely (No. 3). These changes make the bold,

No. 3.

straight lines of the coupon stand out in marked contrast, and are almost sure to attract the attention as one turns over the page.

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The contrast between the coupon and the rest of the advertisement (not to mention the contrast with other advertisements) is not the only source of attention value of the coupon. A second attractive feature is found in the direct

No. 4.

command ordinarily placed between the body of the advertisement and the coupon. The expressions "Cut this corner off," "Cut along this line," etc., have a decided value in attracting attention. (See chapter on "The Direct Command as a Form of Argumentation.")

Another source of attention value in this kind of advertising is in the dotted line indicating

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the place at which the coupon should be cut off. This dotted line suggests action, and as such is interesting and attracts the attention. If the dotted lines could give the impression of perforated paper, the results would be better. Where possible it would be well to have the paper perforated along the line where the coupon is to be torn off.

Another source of attention value in this kind of advertising in its modified form is found in the devices employed (No. 4) to direct the attention to the dotted line or to the "Cut this corner off." The index fingers, all pointing to the same thing, give one the impression that there must be something very special at that point, and many persons look to see what the fingers are pointing at, when otherwise they would pass the entire advertisement by without noticing it.

Definite and Specific

In addition to its power in attracting attention, the return coupon has a further psychological value in that *it gives the reader something definite and specific to do.*

I have frequently observed in teaching that if pupils or students are given definite and specific tasks to perform, they perform them with alacrity. If, however, the tasks are made general and assigned as something which they might do sometime, no impression is made on their minds and nothing is done. A necessary characteristic

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of a teacher is the ability to make his students know just what he wants them to do. A prime requisite of an advertisement, when direct evidence of attention is desired, is that it should give the reader something definite and specific to do at once, *i. e.*, that the reader should open a correspondence with the firm. With our present knowledge there could probably be no better way of making that end clear than by the use of the return coupon. Its function is much like that of a sun-glass. The rays of the sun, falling on a piece of paper, will warm it, but will not cause it to burn. If the rays are allowed to shine through the sun-glass and to focus at one point of the paper, the whole will soon be ignited. The argument in an advertisement may be good, it may even make the reader "warm" with the desire to secure the goods, but his desire may not result in action. The heat was not focused at one point. The return coupon concentrates all this desire or "warmth" at one point; it overcomes procrastination and secures the necessary action.

Makes Answering Easy

An additional psychological value of the return coupon is that *it makes it easy to answer the advertisement.* There are persons who will climb the Matterhorn because of the difficulty of the ascent. There are those who will spend hours and even days trying to solve

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difficult puzzles. These are but apparent exceptions to the universal rule that mankind is as a class hopelessly lazy. We desire the best results, but we want to secure them with the least possible labor. We refuse to take two steps when one is sufficient. Business men recognize this fact and place their merchandise where it can easily be secured by the buyer. They choose a site for their stores where they will be the most accessible. They arrange their goods so that they may be most easily seen and secured by the public. They send out their representatives to display the goods and leave nothing to the purchaser but to indicate what he wants. In short, everything possible is done to make it easy for the customers. The traveling salesman made it so easy for the customer that he undoubtedly gave orders for goods which he would not have purchased if he had been obliged to go after them or even to write a letter for them. For a mail-order house, the return coupon supplements or takes the place of a traveling salesman. It presents itself to the possible customer, and all he has to do is to fill it out and return it, and the goods are forthcoming. Even for the experienced business man it is easier to fill out a blank than it is to dictate or write a letter. But all are not experienced business men. There are those who make good customers, but whose only formula for letter-writing is "I take my pen in hand to let you know

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that I am well and hope that this will find you the same." For such a person to compose a business letter is a task of no small importance. He does not know whether to begin with "Dear Sir" or with "Gentlemen;" he does not know whether he should close with "Yours truly" or "Affectionately yours." The betrayal of his ignorance and the effort of composition are hindrances of such magnitude that he is frequently deterred from securing the desired goods. To be relieved from this embarrassment and toil is for him a veritable boon. The return coupon makes answering easier for all, whether with or without experience in writing business letters. It makes answering easy not only because it has the return letter already composed, but also because the composed letter is easily accessible. Some advertisers do not seem to appreciate this latter advantage and so allow the coupon to be placed near the middle of the page and on the inside of it — next to the binding. The following reduced reproduction is an example of such a blunder. (No. 5.) This makes it unnecessarily difficult to get at, and so places an obstacle in the way of every one who desires to answer. Many would surmount the difficulty, but some would not. It certainly is bad business policy to put such a needless obstruction in the path of every "would-be customer." The three-cornered coupon can be cut or torn off more easily than any other. If

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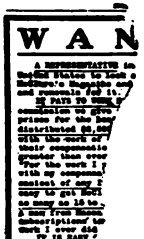
placed on one of the four outer corners of a publication it can be severed with a single cut of the scissors or torn off with a single tear. It is more accessible than it would be if in any other shape; it makes the answering of the advertisement easy, and to that extent is the best possible shape for a return coupon.



No. 5.

The task recently devolved on me of purchasing a baby carriage. I had never been interested in them before and did not know where I had ever seen them in stores, and so did not know where I should go to secure one. I turned at once to the advertisements in the morning paper and saw baby carriages advertised at a certain down-town store. I went there at once and asked the floor-walker where they kept them, and he politely informed me that they did not handle them. I assured him that I had seen their advertisement in the paper that morning and that they must therefore have them. He made further

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inquiries and found that they did have them, and I secured my desired article. Having seen the advertisement in the paper, it was easy for me to find what I wanted. All advertisements make it easy for the purchaser to know where the class of goods are kept which he desires to secure. It will readily be seen that one of the great functions of any advertisement is in this way to make it easy for the purchaser to find what he wants. The coupon has the additional value of being of such a nature that the purchaser can secure the goods desired without going out after them and even without the trouble of composing and writing a letter. Some of us are not so lazy as others, but we are all procrastinators. We often decide that we want a thing, but we put off the purchase till the desire has gone and so we never secure what we wanted. Procrastination is so easy that we will put off till to-morrow what would cause us trouble to do to-day. With the coupon, the task of ordering the goods is so easy that there is almost no excuse for procrastination, even if we are somewhat lazy. An advertisement should make it as easy as possible for the purchaser to secure the goods he desires and should take away every possible ground for hesitation. In these particulars the coupon is especially strong.

We have now seen that the coupon attracts attention because of its novelty or contrast, because of its triangular shape, because of the

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direct command and the index finger which frequently accompanies the return coupon. We have seen that it is psychologically strong because it is specific and direct in its appeal. We have also seen its strength in that it makes answering the advertisement easy and calls for immediate action. All these advantages are but supplementary and subsidiary to the great function of the return coupon. Its real value is to be found in the fact that *it suggests to the reader that he should sign his name, tear out the coupon and send it to the address given.* The prime value of the coupon is lost unless this is attained. The coupon does attract attention, but that is of value merely because in attracting attention it brings the suggestion to the mind of the reader and keeps it there. It is specific and direct, but that is of value only because it holds before the mind the one specific suggestion which is desired. It makes action easy, and that is good because then no barrier is placed in the way of the suggestion. It calls for immediate action and that is essential because unless the suggestion is acted upon at once, it grows weaker and would fail of its purpose.

Suggests Action

In connection with direct commands and return coupons there should be some mention made of other similar devices for suggesting action. Among these latter are the return pos-

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tal card, the money envelope, the money card, etc. There seems to be no end to the number of such devices that skill and ingenuity may discover. They are used with great profit by their inventors, but when the novelty has worn off, they are less valuable, and other forms are then demanded.

This chapter in substantially its present form appeared first in a magazine article. One of the readers of the magazine decided to make an experiment in applying the principle to his own business. He noticed this sentence, "They are used with great profit by their inventors, but when the novelty has worn off, they are less valuable, and other forms are then demanded." He tried to preserve the psychological value of the return coupon, but to present it in a new form and in such a way that it would be adapted to his demands. The result of his labor is seen on the opposite page in No. 6.

After the form had been in use a short time we received the following letter from the inventor of it.

CHICAGO, April 2, 1903.

DR. WALTER DILL SCOTT,
Northwestern University,
Evanston, Ill.:

Dear Sir, — I am sending you under separate cover copy of the "Ballot" advertisement, which we got out

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Check the edition of Price List you wish sent (will send both if desired), also articles which you handle or use, so that we can send samples and special information from time to time.

☐ Hardware Dealers' Edition

- ☐ Steel Roofings
- ☐ Steel Ceilings
- ☐ Tin Plates
- ☐ Galvanized, Smooth and Planished Iron
- ☐ Ridge Roll and Cresting
- ☐ Skylights and Cornices
- ☐ Sheet Zinc and Copper
- ☐ Conductor Pipe, Gutter, Etc.
- ☐ Roofing and Metal Paints
- ☐ Asbestos Paper, Mill Board, Etc.
- ☐ Asbestos Pipe Covering, Cements, Etc.
- ☐ Mineral Wool
- ☐ Furnace Pipe and Registers
- ☐ Tinners' Tools

☐ Lumber Dealers' Edition

- ☐ Building Papers
- ☐ "Lincoln" Roofing
- ☐ Portable Gravel Roofing
- ☐ Asbestos Fire-Proof Roofing
- ☐ Waterproof Papers
- ☐ Tarred Felts
- ☐ Pitch and Coal Tar
- ☐ Two and Three Ply Roofing
- ☐ Asphalt Roofing
- ☐ Roof Coatings
- ☐ Deadening Felts
- ☐ Carpet Linings
- ☐ Asphalt Metal Paints
- ☐ Roofing and Paving Asphalt

*Name*_____

*Town*_____ *State*_____

☐ **Check here if not interested in the above lines of goods and we will remove your name from our mailing list.**

STAMPED ENVELOPE ENCLOSED FOR RETURN OF THIS FORM.

No. 6.

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recently along the lines suggested by your articles in *Mahin's Magazine*, and are pleased to report that the returns are very satisfactory. Over 50 per cent. of the sheets were returned, making a very valuable mailing list, but we do not consider this as important as the psychological value of having the retail dealers make a special request for our monthly price list.

As a test case, we mailed thirty of these sheets to dealers to whom we had been sending our catalogues and other advertising material regularly for a number of years, but had never received any returns. Of these seventeen were returned, three containing special requests for prices, one of which resulted in an immediate order.

I find the knowledge of the psychological principles of advertising very helpful in planning my advertising work, and will be pleased to give you any further data in regard to the results obtained that you may wish.

Yours truly,

J. C. WOODLEY.

At the time this chapter was prepared for publication in magazine form (May, 1902) there were but few return coupons appearing in the current magazines, and those appearing were placed with but little regard to position. Thus in *Munsey's Magazine* for May, 1902, there were but three return coupons, and one of them was so placed that it came next to the binding and would be hard to detach. In *McClure's* for the same month there appeared four return coupons and one of them was next to the binding. In the *Century Magazine* for the same month there

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appeared but a single return coupon. Comparing all the copies of the magazines at hand for May, 1902, and for May, 1903, I find that there is a very decided increase in the number of return coupons and especially in the number of three-cornered coupons. Furthermore in all these magazines for May, 1903, there is not a coupon placed next to the binding or in the middle of the page, as was done so frequently before this article appeared in the magazine.

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VII

FUSION

Illustration from Life

SOME years ago I was spending my Christmas vacation at my old home. One morning I was sitting in the library reading short stories. While I was reading, my sister went to the piano and began playing some of the tunes which she had played years before, and which I had particularly enjoyed. I did not notice the fact that she was playing at all, but I thought the stories were peculiarly beautiful. The next day I remarked about them and had occasion to refer to them. I was greatly disappointed upon reading them the second time to find that they were very commonplace and that ordinarily they would not have pleased me at all. If I had paid strict attention to the short stories alone, they would have proved themselves to be very uninteresting. As it was, I paid partial attention to each and fused the music and the reading into one total impression which was extremely pleasing.

On certain occasions when friends are together all have a jolly good time. A spirit of good fellowship reigns, and every one is happy and contented. The stories told are appreciated and applauded. The jokes all seem so fitting and

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pertinent. Even if they have been heard before, they are so well told and so *apropos* that they are as good as new. The next day one is often chagrined when he tries to relate the stories and jokes, and to tell why he had enjoyed the occasion so well. The stories may have been mere commonplaces and the jokes nothing but old standbys, but they did not stand alone; they were enforced and improved by the spirit of good fellowship which pervaded the company. The place, the stories, the jokes, the refreshments, the amusement, and the occasion all united their influences to make a total impression. They were fused together, and their total product was what had so delighted us. Any one of these things taken singly would have been insufficient to produce any pleasant result, but when taken collectively each shines in a borrowed light.

If I hold a lead-pencil vertically in my hand directly in front of my nose, the name of the manufacturer printed on the pencil will be barely visible, if it is on the extreme right side of the pencil. If, however, I close my right eye, the name disappears. If I make a mark on the pencil directly opposite the name of the manufacturer and hold the pencil as before, both the mark and the name are visible. If I close the right eye, the name disappears. If I close the left eye, the mark disappears. As I look at the pencil with my right eye I get a slightly different

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impression than I do when I look with my left eye, and *vice versa*. We are not conscious of these two partial impressions, for we fuse them into one total impression, which gives us a better perception of the pencil than is contained in the mathematical sum of the two partial perceptions. A discussion of the result of this fusion of the two impressions made upon the two eyes would be out of place at this point, but it might be remarked that among these results are accurate judgments of the distance and of the thickness of the pencil.

At any point of time we may be receiving impressions of sight through the eyes, impressions of sound through the ears, impressions of hunger or thirst from the body, and at the same time we may be thinking of former experiences. All these impressions, sensations, ideas, etc., are fused together and have no separate existence. Each plays a part in determining the whole conscious impression or condition, but the parts do not exist alone. It is a general law of psychology that *all things tend to fuse and only those things are analyzed that must be analyzed.* In the beginning we perceive objects as concrete wholes and then later analyze the wholes into parts. If the first animal which a child sees should be a dog, it would see the dog as a very different thing from what it would later appear to him. It would be a dog, but his idea of it would be so

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indefinite that he would not notice whether it had four or six legs, whether it had ears or trunk, nose or bill, or whether it was white or black. By later experience the child would learn that the dog was of a particular color, had four legs, two ears, that it barked, ate, and that it had certain other peculiarities and characteristics. The expert in natural history and the dog fancier each notice certain things about the dog that the rest of humanity never sees at all. We grasp everything as a concrete whole first, and then by later experience we analyze this whole and add to it.

We Perceive Entireties

The point to be emphasized is that *we do not first perceive the parts and unite them to form the greater wholes, but that we first perceive the wholes and only after the process of analysis has been completed do we perceive the parts.* There are certain products of fusion which by most of us are never analyzed at all. This is the case with the sensations which we receive whenever we breathe. With every breath the diaphragm contracts and expands, the muscles raise and lower the ribs, the lungs receive and discharge a volume of air, the air passages in the nose and windpipe enlarge and contract. All these play a part in making the total sensation which we call breathing, but we cannot with ease analyze the different parts. They are fused together, and as it would be of no particular benefit to analyze

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the product we have never done so, and we never would have known that the feeling was the product of these elements unless we had reasoned it out first.

We know of no object which is independent of all other things. In fact, the value of all objects depends upon the relationships which they have to other things. We think of things only in their relations, and these relationships fuse and constitute the object as we know it. Anthracite or bituminous coal, yellow clay and black loam, can all be thought of as pure and clean, but under certain conditions they become dirt. None of these are dirt in themselves, but in certain abnormal positions they are nothing but filth. When bituminous coal is on the face of the coal heaver it is almost impossible to think of it as coal. It has ceased to be coal and has become dirt because of the abnormal environment into which it has come.

The manner in which the environment fuses with an article and determines its value is well illustrated by food in a restaurant. The food may be of the very best quality and the preparation may have been faultless, yet if the service is poor,— if the waiter's linen is dirty and his manner slovenly,— the food does not taste good and is not appetizing. You may reason out that the waiter has nothing to do with the preparation of the food and that his linen has not come

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into contact with it, but all your reasoning will do you but little good. The idea of dirty linen and this particular food are in your mind indissolubly united, and now, instead of thinking of food in the abstract, you are compelled to think of food in this particular relationship, and the result is anything but appetizing.

The same thing is illustrated in all places of business. Stores and offices have a tone or atmosphere about them, and everything they have to offer is seen through this atmosphere. I heard a gentleman say recently that he had gone to a particular store to buy a certain article. The store was recommended to him and he was convinced that it was the best place to buy the merchandise desired. When he entered the store he found such a shoddy tone to the entire establishment that he could not believe that the goods which were shown him were desirable. If he could have seen the goods in another store he would have purchased them at once, but he could not convince himself that the goods shown him there were what he wanted, so he left without purchasing them. We are not able to look at things impartially and abstractly, but we judge of everything in the light of its environment — it fuses with its environment and the environment becomes a part of it.

The principle of fusion is a subject which should be carefully considered in placing an

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advertisement. If we could think quite analytically and see the advertisement just as it is, and as a thing independent of its environment, it might be profitable to place our advertisements on garbage boxes and in cheap and disreputable publications. As we are constructed, however, such a course would be suicidal, even for a house dealing in disreputable and cheap articles. *The medium gives a tone of its own to all the advertisements contained in it.* Personally I feel inclined to respect any firm that advertises in a high-class magazine, and unless there is some particular reason to the contrary am willing to trust its honesty. I have always regarded handbills as cheap and irresponsible, and usually think of the goods advertised in this way as belonging to the same category.

Fusion in Advertising

Mediums

In the course of a conversation, a very intelligent lady recently said to me that she never read the advertisements in any of the magazines excepting in her home religious paper. Here she read not only all the reading matter, but all the advertisements as well. I asked her why she read these advertisements, and she said that she knew they could be depended upon. She had the utmost confidence in the editor and believed that he knew every firm advertising, and that by accepting its advertisement and publishing

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it he thereby gave it his stamp of approval. No advertisement appearing in this periodical was compelled to stand on its own merit alone, so far as she was concerned, but had added to it the confidence inspired by this publication. The advertisement and her confidence fused and formed a whole in which the lady never suspected that any other element entered than those which were in the advertisement itself. The lady referred to did not read the advertisements in other magazines as a usual thing. I have seen her turn over the advertising pages of other magazines to see whether there was anything there that interested her. She reads the advertisements in her favorite magazine and merely looks over the others.

In choosing the publications in which he should place his advertisement, the advertiser should not only consider the circulation and the kind of circulation, but he should also consider the tone which each publication would add to his particular advertisement. It is well to have a large number of persons read your advertisement; it is better to have those read it who are interested in it and have the means to purchase the goods advertised; but it is still better to have a large number of the right kind of persons see your advertisement in a publication which adds confidence and recommends it favorably to your prospective customers. Your advertisement

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will, to a greater or less extent, fuse with the publication in which it appears, and the product will not be your advertisement as it was prepared by you, but as it comes out of the mold into which you inserted it.

The statement that a man is known by the company he keeps is not often challenged, and yet the statement would have been equally true if asserted of an advertisement. If a man is seen frequently in the company of rascals, we think at once that he has become a rascal, but do not suppose that he has reformed his associates. The honorable man loses his reputation by associating with dishonorable persons. An honest firm which advertises in a disreputable sheet and brings its advertisement into association with advertisements of a disreputable character lays itself open to suspicion. The firm may be so well known that it would not be greatly injured by such a course, and it might by its presence raise the standard of the other advertisements. Such a work of philanthropy is too expensive and dangerous to recommend itself to the better known firms. If, on the other hand, a disreputable firm should place its advertisement in a high-grade publication and among honest advertisers, it would for a time at least enjoy the confidence inspired by the publication and by the other advertisements. Every honest firm which advertises should insist, how-

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ever, that all dishonest advertisements be rejected, for, unless this is done, the honest men lose and the dishonest ones gain. The advertisements of a publication are in the mind of the public all classed together, and if it is known that one of them cannot be trusted, all are brought into disrepute.

Make-up

Because of this principle of fusion, it is imperative that the advertiser should see that the make-up of the publication is not detrimental to his particular advertisement. Your advertisement would be injured, if, in the make-up, your advertisement of diamonds was placed among advertisements of a questionable character. If I should see an advertisement of an investment scheme that guaranteed unusually large profits, I would suspect fraud at once and would assume a skeptical attitude. If the next instant I should read your advertisement of diamonds, I would be suspicious and would hardly know why I was so. If the next moment I should read the advertisement of a medicine that cured all sorts of incurable diseases, my suspicions would be confirmed, and I would be sure that your diamonds were paste. If, on the other hand, I should see your advertisement placed among those which I knew to be reliable, I would be inclined to classify yours with the others, and would think that it was at least worth while to investigate the matter.

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The cut given below (No. 1) is a good illustration of the violation of the proper consideration of the principle of fusion in the make-up of the advertisements of a daily paper. In a Chicago daily for June 22, 1902, appeared three partial

No. 1.

columns giving announcements of deaths and burials. Inserted in the middle column was this advertisement for Dr. Sleight's fat-reducing tablets. It might be said that this advertisement would attract attention because of its position, but the effect of the atmosphere of death and burials upon the fat-reducing tablets is too apparent to need comment.

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Illustrations

Many of those who choose illustrations for their advertisements follow the philosophy of the Irish boy who said that he liked to stub his toe because it felt so good when it stopped hurting. Many of us are unable to see how the boy had made any gain after it was all over, but he was satisfied and that was sufficient. The philosophic disciples of the Irish boy are found in advertisers who have certain things to dispose of which will not do certain harmful things. First they choose an illustration which will make you believe that what they have to sell is just what you do not want, and then in the text they try to overcome this false impression, and to show you that what they have to offer is not so bad after all. Most of us are unable to see how the advertiser has gained, even if he has succeeded in giving us logical proof that his goods are not so bad as we were at first led to think. We are not logically inclined, and we take the illustration and the text and combine the two. The best that the text can do is to destroy the evil effect of the illustration. Of course, when we read in the text that the illustration does not correctly represent the goods, we ought to discard the illustration entirely and think only of the text, but, unfortunately, we are not constructed that way. The impression made by the illustration and that made by the text fuse and form a whole

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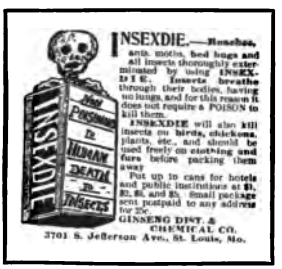
which is the result formed by these two elements.

In No. 2 of the reproduced advertisements the advertiser wants to bring out the fact that his insect powder will not kill human individuals, but will kill insects. The line of his argument would seem to be the exhibition of a picture of the skull of a person killed by his insect powder. He then confidentially assures you that his pow-



No. 2.

der is "non-poisonous to human." Most people who notice the advertisement see the picture of the skull, but fail to see the "non-poisonous to human."

The "ad.-smith" of No. 3 is trying to convince the public that his fountain pen will not blot. He shows us a cut of his pen doing just what he wants us to believe it will not do. If we could look at the cut, then forget it entirely and read the text without being biased by the cut, this form of argumentation might be successful, but that is not the way in which we think.

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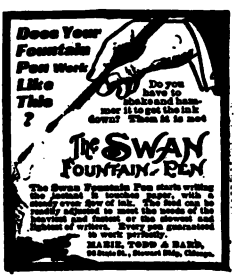
Advertisement No. 4 apparently illustrates the proprietor of the rug company as an escaped convict. The text makes no reference to this fact, but tries to impress upon us the idea that this is the gentleman with whom we should deal.

Advertisement No. 5 is the advertisement of a sweet-smelling cigar. The way the designer of the advertisement goes about it to convince us that his cigars are sweet smelling is to show



No. 3.

us Uncle Sam smoking a cigar which evidently has a very bad odor. In small type he asserts that his cigars are not so bad, but I would not have read that part of the advertisement unless I had had an abnormal interest in poor advertisements.

Advertisement No. 6 represents the "restful racycle," and does so by displaying a lady on such a wheel being chased by an infuriated bulldog. One of the most unpleasant things that can happen to a bicycle rider, and one of the

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things which might deter some ladies from buying a bicycle, is this fact that bicycle riders are liable to be chased by dogs. The writer of this advertisement, by means of this illustration,

No. 4.

practically tells every possible customer to hesitate before she buys this wheel, because, if she buys it, she is likely to be chased by dogs.

In advertisement No. 7 the author is trying to bring out the point that insects do not infest this particular brand of rolled oats. In his illus-

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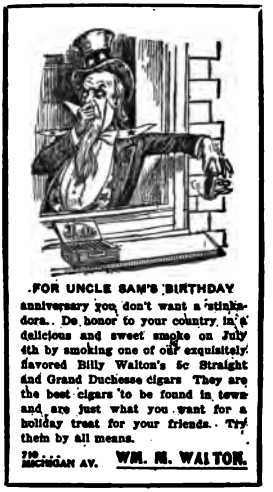
tration he shows great crowds of insects swarming about it. If you examine the advertisement you see that, although the insects do have a particular liking for this kind of oats, they cannot get at them till the can is once opened. To my mind this brand of rolled oats and insects



No. 5.

are so firmly united that I cannot think of the food without thinking of the insects.

Ordinarily the Quaker Oats advertisement has been identified by the presence of the good Quaker. He looks strong, hardy, clean, and honest. In No. 8 we have a portrait of a man who is disgusting in appearance. He fuses with oats, and the product is something which is not appetizing and is a food which I do not care to

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taste. I have always thought of Quaker Oats as something particularly clean and healthful, and my idea was determined in part by associating the food with the Quaker. When this advertisement is before me, I think that Quaker Oats are fit to eat only on condition that I

No. 6.

abstract the thought of the food from that of this filthy-looking specimen of humanity.

In an advertisement of food products the cut is comparable to the waiter in a restaurant. We know that the waiter does not prepare the food, yet he is the representative of the kitchen, and we will not enter a restaurant if the waiter looks repulsive. In a similar manner we know that the cut in an advertisement has nothing to do with the food advertised, but the cut is the rep-

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resentative of the food, and we do not want the food if its representative looks repulsive.

No. 7.

All the advertisements here reproduced seem to be constructed in total disregard to the great principle of fusion which plays an important

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part in all our thinking. In all these advertisements the cut and the text (*e. g.*, in the first advertisement the deaths and funerals and the

Short-sighted man—lacks penetration.

He is a short-sighted man indeed who cannot see the other end of the medical breakfast food habit. Any food that coddles digestion all the time must weaken digestion at last by sheer lack of exercise.

A strong digestion might not be greatly weakened by a diet of rich foods,—but even the strongest digestion cannot withstand the weakening effects of laboratory foods.

Only a short-sighted man will deny that natural digestion must be relied on after all for assimilation of the food elements which the body demands,—and the better the digestion the better the prospect of health. The way to preserve the strength of natural digestion is to offer it only natural food.

The one natural food that fills every need of body and nerve and brain,—that gives every food element in exactly the proportions demanded by the human system,—is

Quaker Oats

No other food has ever been granted that steadfast favor in which Quaker Oats is held at a million well-served breakfast tables.

You'll see the reason, unless you are

A SHORT-SIGHTED MAN.

No. 8.

tablet advertisement) fuse, and each plays its part in forming the total impression. *We are not able to think of the text without thinking of or being influenced by the illustration.*

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The ordinary man and woman are not accustomed to critical logical thinking. They are not accustomed to consider an object or argument on its own merits and independent of all other things. They are more inclined to take objects, arguments, and events in their entirety. They fuse all the impressions of a particular situation into one total impression, and are influenced by events in their totality without being able to analyze the elements which have united to form the whole. If those who construct and place advertisements would consider this principle of fusion, they would be more careful in their choice of mediums, in the association of advertisements, in the make-up and in the construction of the individual advertisements.

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VIII

PSYCHOLOGICAL EXPERIMENT

THE introduction of the experimental method is a modern innovation in the case of all the sciences. Occasional experiments had been made in each of the sciences before experimental laboratories were established, but with the founding of laboratories for experimental purposes physics, chemistry, geology, physiology and botany became established on a new and firmer basis.

A Psychological Laboratory

Occasional and haphazard experiments had been made in psychology ever since the days of Aristotle, but no systematic attempt had been made to apply experimental methods to psychology till 1880. At this date Professor Wundt, of Leipzig, established the first psychological laboratory. Since that date similar laboratories have been established in all the leading universities of the world.

To avoid error as to the conception of the function of a psychological laboratory, it should be held firmly in mind that psychological laboratories have nothing to do with telepathy, spiritism, clairvoyance, animal magnetism, mesmerism, fortune telling, crystal gazing, palmistry, astrology, witchcraft, or with any other of the

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relics of the cults of mediæval superstition. It is true that the question of occult thought transference in its various forms has been put to the test in a few of the laboratories, but as none of these superstitions have been able to stand the test they have been discarded as worthless hypotheses. Quite extensive and elaborate tests have been made with telepathy, but as the results secured were so meager, it is safe to say that there is not a director of any psychological laboratory in Germany or America (most of the laboratories are in these two countries) who has any faith in it.

In frequent association with the cults mentioned above are certain other phenomena which have proven themselves to be worthy of consideration and which do occupy a place in a laboratory. Among such phenomena are hypnotism and what might be classed as prodigies or "freaks." To-day no one doubts the existence of hypnotism, but it is understood as something so different from what it was formerly supposed to be that it is robbed of its mysterious and uncanny connections. A mathematical prodigy is not regarded as an individual who holds relationship with an evil spirit, but as a person abnormally developed in a particular direction. Hypnotism and prodigies play such a subordinate part in the workings of a laboratory that it would not be worth while to mention them at all if it were not for the fact that they are so fre-

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quently associated with the theories which were mentioned above and which can show no good reason for their existence.

Psychological experiments are most frequently carried on in laboratories especially constructed for this purpose. The laboratory for some experiments may be merely a convenient place for meeting and a place free from undesirable disturbances, or it may be rooms fitted up with the most elaborate sort of instruments needed. In experiments in which the element of time enters, instruments are employed which record one one-thousandth of a second with the greatest accuracy.

The nature of the experiment determines the kind of apparatus needed, the number of persons who should take part, the method to be pursued, and the place to be chosen. Great ingenuity has been shown in constructing apparatus, devising methods, and controlling the conditions of experiments. The experiment may be simple and call for almost no equipment, or it may be intricate and call for years of investigation and an enormous expenditure of money to create the necessary conditions for its successful investigation.

In general a psychological experiment is a psychological observation made under "standard conditions." Standard conditions are those which may be repeated and that are of such a

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nature that the various conditions are under the control of the experimenter. This makes it possible for one investigator to perform an experiment and to have his work verified by others or to show wherein the first experimenter has erred. Standard conditions are ordinarily of such a nature that they may be varied, that non-essential and confusing conditions may be eliminated, the various causes investigated one by one, and the real causes given and the object of the experiment explained.

A Psychological Experiment

The nature of a psychological experiment (the kinds of problems that may be attacked, the method of investigation, the kind of results secured, and the treatment of the result) can be understood better by giving a concrete example than by any complete description. The following example is given because it is one that is of special significance to the readers of these pages and because it is so simple that it can be fully described in few words.

Testing Type Faces

The general passenger agent of one of the leading railroad systems was constructing a new time table for the entire system. A dispute arose as to which of two faces of the same kinds of type could be the more easily read. The body of the type was the same in both cases, but the face of the one was heavier than that of the other.

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I.—This is the Style of Type used in Exhibits C and F, and is taken from Exhibit F.

8 40	4 15	3 05	104	lve ... arr	12 30	10 05	11 40	8 40		12 55	9 25	5 35	5 30
8 48		3 17	109	**Laclede**	12 28	9 55	11 30	8 25		12 45	9 15	3 17	5 00
		3 28	116	Meadville			11 15				8 59	2 15	4 30
			121	Wheeling			11 06				8 47	1 45	4 06
			125	Cream Ridge			10 59				s 8 40		
9 20	4 55	3 50	130	Chillicothe	11 46	9 20	10 50			12 11	8 32	12 33	3 10
			135	Utica			10 40				8 22	s 11 50	s 2 35
			141	Mooresville			10 30				8 12	s 11 31	s 2 10
j	s 5 23	4 18	146	Breckenridge		s 8 56	10 21				8 02	11 00	1 45
			151	Nettleton			10 12				7 52	s 10 25	s 1 18
10 00	5 40	4 57	157	Hamilton	11 07	8 40	10 02			11 29	7 42	10 02	12 25
	s 5 50		163	Kidder		8 30	9 51				7 30	9 10	11 55
j	s	s	171	Cameron							s.	s.	s.
10 24	6 10	5 05	172	arr **Cameron Jc.** lve	10 45	8 15	9 35			11 05	7 10	8 40	11 15
	6 20	5 14		lve **Cameron Jc.** arr	10 35	8 05	9 26			10 58	7 00		
			177	Keystone			9 15				s 6 50		
			181	Turney			9 08				6 42		
	6 52	5 40	187	Lathrop	10 10	7 35	8 56			10 28	6 31		
			194	Holt			8 39				6 17		
		6 06	200	Kearney	9 48	7 10	8 28				6 06		
			206	Robertson			8 17				5 55		
	7 45	6 26	211	Liberty	9 31	6 50	8 06			9 41	5 45		
		6 39	216	Birmingham	9 20	6 39	7 56			9 31	5 30		
			219	Randolph			7 49				5 23		
			224	Harlem			7 38				5 10		
	8 25	7 05	226	arr . . **Kansas City** . . lve	9 00	8 20	7 30			8 10	5 00		
				lve . . **Kansas City** . . arr			6 45			8 40			
				arr . . **Leavenworth** . . lve			5 40			8 03			
10 24	d 6 21	5 12	172	lve . . **Cameron Jc.** . . arr	10 40	8 00	8 25		2 06	10 50			

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11.—This is the Style of Type used in D and E, and is taken from Exhibit D.

8 40	4.15	3 05		Lv } { Ar	12 30	10.05	11.40	8.40		12.55	9.25	3.35	5.30
8.48		3 17	109	Lv... **Laclede** ... Lv	12.28	9.55	11.30	8.25		12.45	9.15	3.17	5 00
		3.28	116	Lv. .Meadville... Lv			11.15	A M			8.59	2.15	4.30
			121	Lv. .Wheeling... Lv			11.06				8.47	1.45	4.05
			125	Lv. Cream Ridge. Lv			10 59				s 8.40		
9.20	4.55	3.50	130	Lv. **Chillicothe**. Lv	11.46	9.20	10 50			12.11	8.32	12.33	3.10
			135	Lv.. . Utica Lv			10 40				8 22	s 11.50	s 2.35
			141	Lv.. Mooresville.. Lv			10 30				8.12	s 11.31	s 2.10
...j...	s 5.23	4.18	146	Lv. Breckenridge. Lv		s 8.56	10 21				8 02	11.00	1.45
			151	Lv... Nettleton... Lv			10 12				7.52	s 10.25	s 1.18
10.00	5 40	4.37	157	Lv... Hamilton... Lv	11.07	8 40	10 02			11.29	7.42	10.02	12.25
	s 5 50		163	Lv.... Kidder Lv		8.30	9 51				7.30	9.10	11.55
...j...	s	s	171	Lv... Cameron ... Lv							s	s	s
10.24	6 10	5.05	172	Ar { **Cameron Jc** } Lv	10 45	8.15	9 35			11.05	7.10	8.40	11.15
	6 20	5 14		Lv { } Ar	10.35	8.05	9.26			10.58	7.00	A M	A M
			177	Lv... Keystone... Lv			9.15				s 6.50		
			181	Lv.... Turney Lv			9 08				6.42		
	6.52	5 40	187	Lv.... Lathrop.... Lv	10 10	7.35	8.56			10.26	6.31		
			194	Lv.... Holt...... Lv			8 39				6.17		
		6.06	200	Lv... Kearney ... Lv	9.48	7.10	8.28				6.06		
			206	Lv... Robertson... Lv			8.17				5.55		
	7.45	6.26	211	Lv.... Liberty Lv	9.31	6 50	8 06			9.41	5 45		
		6.39	216	Lv. Birmingham . Lv	9.20	6.39	7.56			9.31	5.30		
			219	Lv... Randolph... Lv			7 49				5.23		
			224	Lv. .. Harlem.... Lv			7.38				5.10		
	8.25	7.05	226	Ar. **Kansas City**. Lv	9.00	6.20	7.30		Frt.	9.10	5.00		
				Lv. **Kansas City**. Ar			6.45		Daily	8.40	P M		
				Ar. **Leavenw'th**. Lv			5.40		P M	8.03			
10.24	d 6.21	5.12	172	Lv. **Cameron Jc**. Ar	10.40	8.00	8.25		2.06	10.50			

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The light-face type did not crowd the figures so closely together and there was more white space around each figure and letter. It was argued by the advocates of this style of type that the white space made the type stand out plainer and that it could be read more easily. The advocates of the heavy-face type argued that that style of type looked larger, that it used more ink, and that the figures could therefore be more easily read. It was impossible to decide which was the more legible without putting them to an authoritative test. For this purpose specimens of both styles were sent to the psychological laboratory of the Northwestern University, with the request that each style be tested as to its relative legibility.

The method adopted was to have pages taken from the time-table set up in both styles of type. A number of persons were then requested to read the pages as fast as possible. The manner of reading was the same as that ordinarily employed by the traveling public with the exception that the reading was done aloud and that the entire page was read instead of a part of it. I conducted all experiments, was provided with duplicate sheets, recorded all errors, and took the exact time of reading with a stop watch.

Two full pages were taken from the time-table and each page was set up in both styles of type, thus making four sheets, of which two were set up with small-face type and two with large. Each

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sheet was marked with a letter, and the four sheets are indicated as Exhibit C, Exhibit D, Exhibit E, and Exhibit F, respectively.

Exhibits C and F have small-face type, as shown in Table I. Exhibits D and E have large-face type, as shown in Table II. The first four subjects are indicated by initial letters of their names, viz., R. C., N. Z., J. S., and D. W. The order in which the pages were read, the time required, and the number of errors made are indicated by the following table:

	C.	D.	E.	F.
R. C.	19′ 26″ (6 errors)			
		15′ 48″ (1 error)		
			15′ 53″ (2 errors)	
				19′ 11″ (0 errors)
N. Z.		22′ 28″ (19 errors)		
	21′ 36″ (17 errors)			
				21′ 11″ (27 errors)
			18′ 5″ (13 errors)	
J. S.				15′ 3″ (59 errors)
		16′ 11″ (21 errors)		
		15′ 30″ (28 errors)		
	15′ 32″ (27 errors)			
D. W.			22′ 56″ (13 errors)	
				20′ 3″ (17 errors)
	20′ 10″ (9 errors)			
		18′ 39″ (7 errors)		

Total time for four persons to read small face type	150′ 12″
Total time for four persons to read large face type	145′ 22″
Excess of time required for four persons to read small face type	4′ 40″
Per cent. of time lost by four persons in reading small face type	3¼
Total errors made by four persons reading small face type	162
Total errors made by four persons reading large face type	104
Excess of errors made by four persons in reading small face type	58
Per cent. of excess of errors in reading small face type	55¾

The four persons who took part in the experiment as described above hardly knew what was expected of them and had had no experi-

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ence in such work. (Special mention will be made of R. C. below.)

Two additional persons were tested and each read over the list of stations and tried reading parts of the pages before beginning the experiment. After this preliminary drill they read the sheets as described above, but read only the first half of each sheet.

The order in which the sheets were read, the time required, and the number of errors made are indicated in the following table. The persons are indicated by C. W. and E. S. respectively:

	C.	D.	E.	F.
C. W.	.....	.....	.....	9′ 58″ (12 errors)
	.....	.....	8′ 52″ (4 errors)	.....
	.....	8′ 34″ (2 errors)	.....	.....
	8′ 51″ (10 errors)	.....	.....	.....
E. S.	.....	.....	6′ 29″ (7 errors)	.....
	.....	.....	.....	6′ 42″ (7 errors)
	5′ 57″ (6 errors)	.....	.....	.....
	.....	5 39″ (6 errors)	.....	.....

Total time for two persons to read the small face type	31′ 28″
Total time for two persons to read the large face type	29′ 34″
Excess of time required to read the small face type	1′ 54″
Per cent. of time lost by using small face type	6½
Total number of errors made by two persons in reading small face type	35
Total number of errors made by two persons in reading large face type	19
Excess of errors made by two persons in reading small face type	16
Per cent. of increase of errors by use of small face type	84

Of the first four subjects R. C. is an employee in the general passenger department of the railroad for which the folder was being investigated. He was familiar with the names of the stations and was accustomed to reading this particular time-table. The first page which he read was

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one with the small type. The other subject who began with the small type was my brother (J. S.). He knew what the experiment was and was determined to read the page in less time than any of the others. He made very many mistakes, but read the first half of the first sheet (F) in six minutes and fifty-two seconds. None of the other four subjects even approximated such a speed or made so many mistakes— thirty-three. He found that he could not maintain such a speed throughout the experiment. The two of the four subjects who began with the large-face type, namely, N. Z. and D. W., were entirely unfamiliar with the time-table and lost time in getting well under way. Under these circumstances it seems fair to regard the first page, which each of the first four read, as merely practice sheets and to eliminate them in the final results.

Summary

Eliminating the first sheet which each of the four first subjects dare, and uniting the results for all the six subjects, we get the following:

Total time for six persons to read small face type	147′ 11″
Total time for six persons to read large face type	129′ 42″
Excess of time required to read small face type	17′ 29″
Per cent. of time lost by using small face type	13½
Total errors for six persons reading small face type	132
Total errors for six persons reading large face type	91
Excess of errors for small face type	41
Per cent. of increase of errors by use of small face type	45

These figures make it clear that the large-face type is easier to read and is not so subject to error as the small-face type.

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It should be added that two of the six persons complained that the small type was hard on their eyes, and three thought that the small-face type was much harder to read than the large-face type.

The test with R. C. was made in the office of the president of the railroad concerned, and twice during the experiments R. C. was interrupted by persons calling at the door. The duplicate copy used with him was not accurate, and so the number of errors which he made in reading was not secured with certainty. With the other five persons tested no such interruptions occurred, and the number of errors made could be accurately recorded. These five were tested in quiet rooms, free from all distractions.

E. S. was able to read so rapidly that it was very difficult to record his errors. Possibly he made more errors than the figures show.

Additional Evidence

The figures given above are the results secured during the last ten days. Some weeks before sheets had been secured, printed in both styles of type — a page of one time-table set up in one style of type and a different page set up in the other style. The total number of trains in the two pages were almost identical, and the names of the stations were apparently equally difficult to pronounce. So far as I could judge, the results secured with these pages were trustworthy, but

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to remove any possibility of doubt I had the pages prepared as described in the experiment above. The results secured in the two cases are in general the same. The experiment as described is therefore a verification of the first experiment. We thus have the results secured from twelve subjects instead of from six. The total result secured from the first six persons showed that the heavy type could be read 12 3-5 per cent. faster than the lighter-face type. The per cent. secured with the last six subjects was 13 1-3 per cent. These results are more uniform than might have been expected. Two of the twelve subjects read the small-face type faster than the large-face. As great a number of abnormal results as two out of twelve may ordinarily be expected. To overcome such errors a large number of persons should take part in the experiment and then in the general average single exceptions are less disturbing.

The marked contrast in the results secured from the two kinds of faces of the same size type is found in the number of errors which the readers made, the difference being 45 per cent. or more. The errors were ordinarily in misreading the time. Frequently the time was connected with the wrong station. One person, for example, read that the train leaves Cream Ridge at 7.52, when in fact the train leaves there at 7.25 and leaves Chillicothe at 7.52. An error of that kind would

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cause the would-be passenger to miss his train. Mistaken pronunciation and similar minor mistakes were not recorded as errors.

When it is taken into consideration that time-tables are used as sources of information as to the times of trains, and when it is discovered that the lighter face type increases the chance of errors 45 per cent. and increases the time necessary to read any part of the time-table 13 per cent., it then becomes evident that such minor differences as that of the two faces here given are details which should be carefully considered. Those who construct time-tables try to get them up in such form that it will be easy and pleasant for the public to read them. The smaller-face type is harder to read, as is shown by the two facts of increase of time and increase of number of errors in reading it. The smaller-face type is also less pleasant reading than the heavier face, as is shown by the fact that several of the persons complained that the small-face type was hard on their eyes. Time-tables are often read at night and by poor light. This fact makes it essential that the type should be of such a nature that it does not unnecessarily strain the eyes.

The results of this experiment are not of more importance to the advertising manager of a railroad than they are to other advertisers who are limited to the use of type for the exploiting of

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what they have to offer to the public. The easier and more pleasant the type is to read, the greater are the chances that it will be read and have the desired effect.

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IX

PERCEPTION

The Physical Basis for Perception

THE relationship existing between our minds and bodies is one of the closest that can be imagined. The basis of this relationship is the nervous system. Roughly speaking, the nervous system consists of three parts: the brain, the nerve endings (sense organs), and the fibers connecting the brain to these nerve endings. The brain fills the skull and is about one-fortieth of the weight of the entire body. The nerve endings are found in the so-called sense organs, that is, the eyes, the nose, the mouth, the ears, and the skin, and also in the joints and muscles. The nerve fibers are white, threadlike bands, which connect each nerve ending with a particular part of the brain, *e. g.*, the optic nerve is such a bundle of nerve fibers and it connects the various nerve endings in the eye with specific portions of the back part of the brain. The function of the nervous system may be likened to the transmitter, connecting wire, and receiver of a telephone. The similarity is striking in the case of all the nerve endings, but particularly so in the case of the ear. If air waves of a certain quality and of sufficient intensity strike against the

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transmitter of a telephone, they are propagated along the line till they reach the receiver. Here they reassume the form of air waves, and when heard are what we call *sound*. If air waves, vibrating from 14 to 40,000 times a second, strike against our ear, a corresponding wave is propagated along the auditory nerve to the brain, where by some unknown process a sensation of sound is awakened which corresponds to the air wave, and is ordinarily referred to as the direct *result* of the air wave, even if such a statement is challenged on the ground that a sensation is purely mental and an air wave is purely physical, and one cannot be the cause of the other. For our purpose it will be sufficient to regard this and all other sensations as the direct result of the contact of the outer world with our nerve endings and particularly with our sense organs. This contact with the outer world seems to be the cause of the sensation, because when there is no contact there is no sensation, and when there is contact, there ordinarily is sensation; the more intense the contact the more intense the sensation, and the quality of the sensation changes with the quality of the contact.

Definition of Perception

The first time a child opens its eyes the ether waves strike against the retina in which the nerve endings are located. Here a current is set up which is propagated to the brain.

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Then a *pure sensation* of sight occurs. The nature of the sensation depends entirely on the nature of the light and the current which it sets up. There is no recognition of the light, there is no comparison of it with other sensations, and no fusing of it into former sensations. This is the only really *pure* sensation of sight which the child will ever have, for its next sensation of sight will be seen in relation to the first sensation. It would be affirming too much to say that the child recognizes or compares this second sensation, but it is quite certain that this second sensation is to a very limited degree modified because of the preceding one. The second experience is added to from the previous one and so is not a pure sensation, but is a *perception*. A perception is a fusion of sensations with former experiences and embraces comparison, recognition, etc. When the term "perception" is used, special reference is intended to the *sensation* or *sensations* which are received through the sense organs and which enter into the total product called a perception. When the term "apperception" is used, special reference is intended to the comparison, recognition, and other processes which are dependent upon former experience and which are not caused directly by sensations received from the sense organs, but are added by the mind to the total product, which in this case is called an apperception, but is the

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identical product which in the other aspects is called a perception. Thus the terms "perception" and "apperception" may be used to indicate the same process, but the different terms emphasize different aspects of the same thing. In the case of a young child, perceptions are largely sensational, while former experiences play a small part. When we come into contact with new objects or come into new experiences, we depend upon sensations to form a large part of our perceptions, and the former experiences add relatively a small part to the total product. The first time we saw an orange, we saw it merely as an object of a particular color. Then we touched it, and our perception of it became the perception of an object with a particular color and a particular shape and touch. Then we tasted and smelt it, and each of these new sensations added a new element to our perception. Now, as we see an orange in the distance, we perceive it as an object having a certain color, touch, taste, odor, weight, etc. The only *sensation* that we have, as the orange is in the distance, is one of sight, but our *perception* contains these other elements which we add from our former experience. Little by little the elements added to perception by sensation decrease and the elements added by former experience increase till we can get a good perception of an orange even if it is at a great distance from us and if it is in

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poor light. The process continues and we begin to use symbols for the object. Thus the spoken word "orange" is sufficient to give us a perception of the object. A picture may represent the original, and later the spoken and printed or written word may be sufficient to bring a perfect perception to our minds. As is evident, a long process of development is necessary before the symbol (picture, spoken and written word) can take the place of the original object. The symbol has no *symbolic* signification, and becomes the object of the sensation itself unless it typifies to the persons something which they have met in their former experience. Thus a Chinese letter is to me no symbol, but is a group of lines. As I look at it I receive the same sensation that a Chinaman does, but the perception is different because he adds more from his former experience than I do. If a geologist finds a rare specimen, it becomes to him an object of great delight, because the simple sensation of sight has added to itself many elements from the geologist's former experience which make the perception very different from the simple sensation. To his son, however, the specimen may be nothing more than a stone which is good for throwing at birds. The sensations which we receive from an object may be a very minor part in our perception of it.

The distinction between the terms "perception"

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and "idea" is very small. If an orange is before me, I *perceive* the orange, and if a symbol of an orange is before me and I think of the orange, I am still said to *perceive* it. If, however, the object and its symbol are absent and I still think of it, I am said to have an *idea* of it in my mind. This distinction is of very minor importance and the terms may be used interchangeably.

We Think in Terms of Things

Whether we are thinking of present or absent objects,— whether our thought is in the form of perceptions or of ideas,—it is certain that a large part of our thinking is determined by the sensations which come to us through eye and ear, and the other sense organs. We first become acquainted with objects through the sensations which we receive from them, and when we think of them afterward we think in terms of sensations. If I should try to learn about a new kind of fruit which was discovered in Africa, I could acquire the knowledge of it in two different ways: I could secure some of the fruit and then receive all the sensations from it possible. I would look at it, touch it, lift it, smell it, bite it, taste it. This would be the best way to learn of it. If this were impossible I might read descriptions and see pictures of it and then I would think of it (have ideas of it) in terms of touch, weight, smell, and taste which were taken from former experiences in which

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similar objects were present to my senses. Whether we think by means of perceptions or by means of ideas, the original *material of thought* and the *forms of thought* come to us in sensations.

Picture and Written Language

The original, easiest, and surest method of acquiring knowledge is through perceptions, in which the sensations play a leading part. In many instances the object of thought cannot be present to the senses and, furthermore, the processes of thought are made more rapid by substituting symbols for the original. Thus, early in the history of the race, a spoken language was developed in which spoken words were symbols for objects of thought. Later, a pictorial writing was invented in which crude portraits were made to symbolize objects. The latest products of civilized humanity in this direction are, first, more perfect portraits and, second, a form of printed language in which the original symbolic spoken word is represented by a symbol. This second form is the most convenient and is the one in ordinary use, but it should be observed that our printed words are nothing but symbols of symbols. The printed word is an uninteresting thing in itself and is only used because it assists perception on account of its simplicity and ease of manipulation. It is easy to describe a scene or a commodity and to reduce the description to printed form that

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will be accessible to thousands. It would be extremely difficult to deliver the scene and the commodity directly to these same people. The description and illustration are, however, not so clear, distinct, and interesting as is the original thing described. The great danger with the printed symbol is that it will lose in perspicuity and interest what it gains in convenience. The printed word has almost no interest for us in itself. It becomes interesting only in so far as it symbolizes interesting things to us. The more the printed page has to say and the easier it is for us to interpret it, the more interesting it becomes.

Advertisers Dependent upon Symbols

Whether fortunately or unfortunately, the advertiser is compelled to rely wholly on symbols in exploiting what he has to offer. He cannot, ordinarily, provide the possible customer with that which he has to offer and thus allow him to become acquainted with the goods in the normal and direct way. He is compelled to substitute the symbol for the thing symbolized. He has a choice between two kinds of symbols — printed words and pictorial illustrations.

The first form of writing was picture writing, but was abandoned because it was not so convenient as are the phonetic characters now in use. Picture writing could not be written or read so easily and quickly as the writing in the characters

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now in use and it was therefore discarded. According to the standard of ease of interpretation, all forms of type must be judged. Type forms must not be regarded as a production of artistic demands, but as a product of the demands of convenience. Hundreds of styles of "artistic type" have been brought forth, but they have not remained in use, for they are confusing to the eye and are not artistic in the full sense of the term. Those forms of type and of illustration best perform their proper functions which are so easy of interpretation that they are not noticed at all. There is no advantage in emphasizing the symbol, but there is a great advantage in emphasizing the thing symbolized. In using printed forms, the advertiser supplies a very small part to the total perception which he desires to make, and he should therefore make this little mean as much as possible.

Black Type versus White Type

A series of experiments were carried on to determine whether white or black type made the more attractive display in magazine advertisements. Experiments were made with over five hundred persons. The background for the white type was gray in some cases, but in most cases it was black. The results show that the ordinary reader is more likely to notice display type which is black than a display type of the same sort which is white.

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A series of laboratory experiments were made on the same subject. Specially prepared pages were shown for one seventh of a second. On part of the sheets black letters on white background and white letters on black background were shown. In other cases one half of the sheet had a black background, with words in white type, and the other half of the sheet had a white background with words in black type. Scores of cards were constructed in which all the possible combinations of white and black were made and shown to a number of persons for such a short space of time that no one could perceive all there was on any sheet. Under these circumstances the subjects saw what first attracted their attention and what was the easiest to perceive. The final results showed that the black letters on a white background were seen oftener than the white type on a black background.

It seems quite certain that, other things being equal, those advertisements will be the most often read which are printed in type which is the most easily read. The difference in the appearance of the type in many cases may be so small that even persons experienced in the choosing of type may not be able to tell which one is the more legible, and yet the difference in their values may be great enough to make it a matter of importance to the advertiser as to which type he shall use.

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If the matter of the proper use of type is of importance to the advertiser, it is even more important that he should make a wise use of the illustration, which is the second form of symbol at his disposal.

Twofold Function of Illustration

The illustration is frequently used merely as a means of attracting attention, and its function as a symbolic illustration is disregarded. In a few cases this may be wise and even necessary, but when we consider the value of an illustration as a symbol, we are surprised that illustrations are not used more extensively as well as more judiciously. The first form of writing, as stated above, was picture writing, and the most simple and direct form of graphic representation is through the picture and not through the printed word. At a single glance we can usually read about four words; that is to say, the width of perception for printed words is about four. At a single glance at an illustration we can see as much as could be told in a whole page of printed matter. The width of perception for illustrations is very much more extensive than it is for printed forms of expression.

The illustration may perform either one or both of two functions. It may be a mere picture used to attract attention or it may be an "illustration" and a real aid to perception by assisting the text to tell the story which is to be presented.

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In the first case it would be called an irrelevant illustration; in the second case it is relevant. There have been several investigations carried on to determine the relative attention value of relevant and irrelevant illustrations. Although the results thus far reached are not so decisive as might be desired, yet it seems certain that the attention value of relevant illustrations is greater than had been supposed and that the irrelevant "picture" is frequently not so potent in attracting attention as a relevant illustration would be. Under these circumstances it seems that, in general, the illustration in an advertisement should have the double function of attracting attention and assisting perception. Which one of these functions is the more important might be a profitable question for discussion, but when these two functions can be united in the same illustration, its value is enhanced twofold. Irrelevant illustrations are produced merely because they are supposed to attract attention, when in reality they may attract the attention of no one except the person who designed them and of the unfortunate man who has to pay for them. Similarly there are many illustrations produced and inserted in advertisements because they are supposed to assist the perception. They are supposed to tell the story of the goods advertised and to be a form of argumentation. The designer of the illustration and one familiar with the goods knows

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what the picture stands for, and so for him it is a symbol of the goods and tells the story of the special advantages of the goods. To one unacquainted with the illustration and with the goods advertised, the illustration is no illustration at all.

Illustrations Intended for the Public

When we want to teach a child the letters of the alphabet, we do not secure some "sketchy" and artistic looking letters, but we secure those which are simple in outline and of a large size. We choose those which make a very decided sensation, for in that way we help determine the perception. When the child becomes more familiar with the alphabet, he can read small letters and those which are not printed so plainly. In forming perceptions there must at first be a large element furnished by sensation, whether the perception be formed from an object directly or indirectly from a symbol. Those who forget this principle are likely to construct illustrations which do not illustrate. Their symbols are only symbols for those who are well acquainted with the goods advertised. As an example of this sort of illustrations we reproduce herewith an illustration which appeared in the magazines less than a year ago.

This advertisement for F. P. C. wax (No. 1) seems to be an attempt to tell a great deal about the goods by means of an illustration. It took

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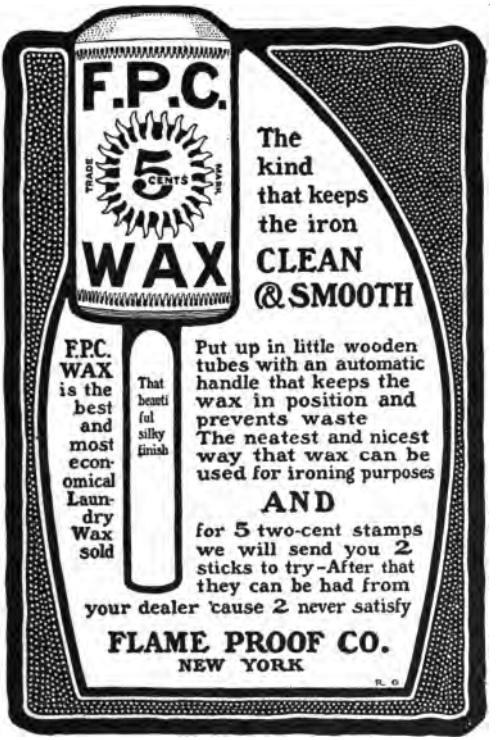
me some time to translate it, and after I had interpreted it as far as possible, I showed it to



No. 1

some ladies who were magazine readers. None of them had ever taken the pains to figure it out. One of them thought that it was an advertisement of Bibles. When my attention was called to it,

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I saw the resemblance between the cut as a whole and the cover of an ordinary Bible. The white space is evidently intended to look like the bottom of an iron and the border containing the words "F. P. C. Wax" is intended for a cut of a stick of the wax. None of the ladies had interpreted the cut in that way, but when their attention was called to it, they agreed with me that that was probably what the "artist" had intended. We were unable to interpret the white dots and the heavy black border. To those familiar with the advertisement the sensation aroused by the cut is sufficient to produce the desired perception. For all others the sensation is not sufficient to call up the necessary elements to complete the perception and it has no more meaning than a Chinese puzzle. It has nothing which it seems to be trying to tell to those who turn over the pages of the magazine, and so does not attract their attention. We notice those illustrations which have something to say and say it plainly. We disregard in general those things which do not awaken in us a perception. The sensation which does not embody itself into a perception is of such little interest to us that we pay no attention to it at all.

The advertiser desires to produce certain perceptions and ideas in the minds of the possible customers. The material means with which he may accomplish this end are printed words

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and illustrations, which in the first instance awaken sensations; these in turn embody themselves into perceptions and ideas. These

No. 2

sensations seem so unimportant that they are frequently forgotten and the place which they are to take in forming the desired perceptions and ideas is disregarded.

This second advertisement of F. P. C. wax (No. 2) appeared several months later than the

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one given above, and is inserted here to illustrate how an advertisement may be improved in the particular point under discussion. The newer cut is really an illustration. It helps perception by giving a sensation which is more decided and more easily interpreted. It furthermore attracts attention and tells the story better than could be done by any text.

The advertiser is so familiar with what he has to offer that he cannot appreciate the difficulty the public has in getting a clear and complete perception by means of his advertisements of the goods advertised. It is almost impossible to err on the side of clearness. A sketchy illustration may appear artistic to the designer, but there is danger that it will be regarded as meaningless scrawls by the laity, and so it will not receive a second thought from them. The text and the illustration should, first of all, be clear and should in every way possible assist the mind of the possible customer in forming a correct perception of the goods being exploited.

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X

APPERCEPTION

The Mind is a Unit

ANATOMY is the science which divides the human body into its constituent parts, and is a completed science when it has all of these parts correctly described and labeled. Physiology is the science which describes and explains the different functions of the human body. It supplements anatomy by showing the function of each of the bones, muscles, and organs, and by showing their mutual relations. In anatomy we divide the body into distinct divisions, and in physiology we discover different functions. We often try to think of mind after the analogy of the body, and by so doing are led into confusion. The attempt has been made to divide the mind into a definite number of separate faculties (anatomy). The function of each faculty has been described as something quite different from the other faculties, and an attempt was made to define these faculties exactly and to describe their functions completely (physiology). The attempt has failed and has been abandoned. The mind is not a bundle of faculties. It is not composed of memory, reason, association, etc., but it is a unit which remembers, reasons, feels, etc. No one function is carried on to the exclusion

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of all others at any one time. During all of its conscious existence the mind feels, knows, wills, etc., but at certain times it is employed in reasoning more than at others, and at one time it may be feeling more intensely than at others, but no one function ever totally occupies the field. When the mind recognizes an event as having occurred in the past, it is said to remember, but feeling, attention, and association of ideas may have entered into this process of memory. No one mental process is a thing existing apart and independent of other processes. The anatomical method can never be applied to the mind. The functions of the mind are not independent activities of the mind, but in every function memory, perception, suggestion, and many other functions play a more or less important part.

We have no "apperçeiving" faculty which is to be distinguished from all other faculties, and which carries on an independent process. The mind does act in a particular and well-known manner, which we have called "apperception." The term has been used for two centuries, and is applied to a well-known process, or function, of the mind which is of great practical and theoretical importance. It includes sensations, perceptions, assimilation, association, recognition, feeling, will, attention, and other actions of the mind, and yet is a very simple and well-known

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process. It can best be understood if discussed and illustrated from its various aspects.

Apperception a Form of Attention

The first thing to be said about apperception is that it is the act of the mind by which perceptions and ideas become clear and distinct. I may look at my ink bottle on the middle of the table. I see it very clearly and distinctly. I can also see, at the same time, other objects on the table, and even some which are not on it at all. As long as I continue to look at the ink bottle the objects distant from the table are not visible. The ink bottle is very clear and the ones near it are comparatively so; those a few feet away are very indistinct or entirely invisible. I am said to apperceive the bottle, but to perceive the more distant objects. Certain parts of the bottle are not noticed particularly, while some of the objects on the table stand out plainly. It is quite evident that "clearness" does not draw a set line between the various objects, but there are all grades of clearness, from the most clear to the most obscure. We feel that the mental process connected with the ink bottle and that connected with the other objects are different and yet there is an uninterrupted gradation from one to the other. When considered from this point of view apperception is simply an act of attention, for what we attend to becomes clear and distinct to us, while that

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which is not attended to remains indistinct. Furthermore, there are all degrees of attention. Certain things demand our greatest attention, while others are entirely disregarded. Most things, however, are of the intermediary class. We pay a certain amount of attention to them, but they might easily receive more or less. Some things catch our attention so slightly (are so slightly apperceived) that we are not aware that we have noticed them at all. I did not know that I had ever noticed the walls of the barber shop which I patronize, but as soon as I entered it recently I knew that changes had been made, and I missed certain details which I had frequently seen, but to which I had paid so little heed that they were merely perceived and could not be said to have been apperceived at all.

Apperception and Past Experiences

The second thing to remark about apperception is that it is more than mere attention. It is attention of a particular kind. Our attention to an object or event is an act of apperception if the attention is brought about by means of the relationship of this object or event to our previous experience. Apperception has been defined as *the bringing to bear what has been retained of past experience in such a way as to interpret, to give weight to the new experience.* This aspect of apperception has been most clearly

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brought out in the following quotation from Dexter and Garlack:

"A child who has not learned any physiology, and who has not previously looked through a microscope, looks at a drop of blood under the microscope. He probably says that he sees *nothing*.

"Another child who has, we will suppose, studied botanical sections under the miscroscope, looks at the same drop of blood and says that he sees *some small round bodies*.

"A third child who has learned a little physiology, looks through the microscope, recognizes the small round bodies as corpuscles, notes that the majority are reddish, looks for and perhaps finds a white corpuscle, and so comes to the conclusion that it is *a drop of blood* that he sees.

"In the three instances everything is the same *except the children*. The differences in the results of the acts of observation must be due to the differences in the minds of the children. The reason that the third child saw more than the other two was that he was fitted by previous training to see more. In order that we may see a thing properly it is not sufficient that rays of light should come from the object to the eye and nerve vibrations travel along the optic nerve to the brain. The mind must be in a position to interpret, to understand these vibrations. To sensations coming from without the mind

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adds imagination (*i. e.*, image-making) working from within. This combination of action of object on mind and the reaction of mind on object is known as *apperception.*"

The third thing to notice about the process of apperception is that it increases our knowledge by gradually adding new elements to our previous store of experience. In the use of the microscope, as cited above, each child added to its store of knowledge in proportion to the amount of previous training which could be brought to bear at this point. The first child had had no previous training in this or in any related work, and so was unable to profit by this experience. He did not focus his eye correctly, and could not direct his attention to what the third child saw. An object, event, or situation which has no relation to our previous experience fails to attract our attention, — is not apperceived, — makes no impression on us, and adds nothing to our store of knowledge. Nothing is regarded worthy of our consideration which does not relate itself to our previous experience. In fact, we can imagine nothing which is out of relation to all our previous experiences. Things and events are only significant in so far as they signify relationships which we know. The slight difference between the letters "O" and "Q" is immediately noticed by us, but

Gradual Growth of Knowledge

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would not be seen by any one unfamiliar with our alphabet. There are many important characteristics about the Chinese alphabet which we never observe, because they mean nothing to us. They are unimportant for us because they do not unite themselves with our previous stock of ideas. We interpret all things by our own standards (our stock of ideas) — we observe only those things which have significance for us, we increase our store of ideas not by adding new and independent ones, but by uniting the old with the new. We are not capable of forming entirely new ideas, but must content ourselves with adding new elements to our stock in trade. All our so-called new ideas are composed very largely of old elements.

The practical importance of this subject for the advertiser is found in the three aspects of the process as discussed above. In the first place, some advertisements never stand out clearly and distinctly in the minds of the possible customers. We may turn over the pages of a magazine and see every advertisement there, but our seeing may be of the sort of those of whom it was said, "having eyes they see not." I frequently turn over the pages of publications and direct my eyes toward advertisements and hold them there long enough to have noticed all the striking characteristics of them, and yet in ten minutes

Concentration

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afterward I do not know that these particular advertisements are in the publication at all. I had perceived them, but had not apperceived them. The designers of these advertisements had not been successful in concentrating my mind on any particular thing which had a special reference to my previous experience, and which would therefore be apperceived by me.

We cannot apperceive a large number of things at the same time. An advertisement which is constructed upon the principle that all parts of it should be attractive at the same time will so divide the attention that no part of it will stand out prominently, and so it will not be noticed at all. A superfluity of details should be strenuously guarded against in both the text and the illustration. If a single point of an advertisement is apperceived it serves as an opening wedge for the entire advertisement. If, however, there are too many details the attention may be so distracted that none of it will be apperceived, although it may all be seen (perceived). The things which we perceive do make a slight impression on us, but they are so unimportant in comparison with the things that we apperceive that we may almost disregard them entirely.

The second point for the advertiser to consider is that the apperception value (identical with attention value in this case) of the adver-

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tisement does not depend so much on what the reader receives from the advertisement, but what he adds to it. Your advertisement and all other printed matter is composed of a few straight lines and a few curved ones, of a few dots, and perhaps one or more colored surfaces. These, when seen, cause a sensation of sight, but that is the smallest part of the result of your advertisement. These visual sensations are immediately enforced by the previous experience of the reader. The value of your advertisement depends almost entirely on the number and kind of former experiences which it awakens. The advertisement is not a thing which contains within itself the reason for its existence. In and of itself it is perfectly worthless. *The aim of the advertisement is to call forth activity in the minds of its readers* — and, it might be added, *action of a particular sort.* The advertisement which is beautiful and pleasing to its designer, and which begets activity in his mind, may be perfectly worthless as an advertisement. The drop of blood in the miscroscope brought forth no activity on the part of the first child who looked at it, as cited above. The child had nothing in its former experience which was suggested by the appearance of the drop of blood, and so it was not interpreted and was not connected with the child's former life, and so made no impression

Know Your Public

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on him. That which happened to the children in looking through the microscope happens every

No. 1

day to the readers of advertisements. The same advertisement will call forth different amounts of activity from different readers. Some advertisements have a meaning to those who are well

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acquainted with them, and to such they tell their story accurately and quickly. To some readers they tell a confused or erroneous story; to others they have nothing to tell at all. As an example of such advertisements we have reproduced the advertisement (No. 1) of Whitman's chocolates.

This looks like a very neat advertisement, but it fails at the two crucial points — it neither attracts attention nor assists in forming a correct perception of the goods advertised. As a proof of this statement it is but necessary to refer to the result obtained with this advertisement in a series of tests recently made. The magazine containing this advertisement was shown to 516 young people between the ages of ten and twenty-five. After they had looked at all the advertisements they were asked to write down all the advertisements which they had noticed and could remember. One girl remembered that she had seen an advertisement of candy, but could not remember whose it was or what the advertisement was. One boy remembered that "Whitman's candy" was advertised, but thought the advertisement had the picture of a lady eating a piece of candy. The first of the two probably referred to Huyler's advertisement (Huyler advertised in the same issue) and the second certainly confused the two advertisements. Besides these two none of the

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516 persons noticed the advertisement sufficiently to remember that it was there at all.

No. 2

This second advertisement (No. 2) of Whitman's appeared in a later issue of the same magazine. I have made no tests of this advertisement, but feel sure that if the 516 had seen this instead

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of the other advertisement a very large per cent. of them would have noticed it and have remembered it. It attracts attention and tells more at a glance than could be told in many well-formed sentences. It would create a desire on the part of many of these young people to send for or to purchase a box of such desirable looking candy. It is an illustration which illustrates by helping perception, and it also attracts attention because it has something to tell.

Introducing a New Commodity

The third thing for the advertiser to observe in connection with apperception is that advancement in knowledge is made by joining the new on to the old. The pedagogical maxim of advancing from the known to the unknown finds its justification here.

It is very difficult to get the public to think along a new line, because they cannot connect the new fact with their previous experience, *i. e.*, they cannot apperceive it. This makes it very difficult to introduce a new article on the market. Old firms find it difficult to introduce a new brand, and new firms find it difficult to get themselves noticed at all. Frequently firms have resorted to questionable means to get the public even to notice them. It seems to be impossible for them to get a hearing for the details of their propositions until they have let the

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public become familiar with their names and know who they are. The promoters of Omega Oil have been severely criticised for their goose, but the goose has introduced them to the public, and now they are in a position to get a hearing and to present the arguments for their commodity. It is quite possible that the expense of keeping the goose before the public was an unnecessary luxury, but they have been wise in not advancing their argument faster than the public was willing to hear it. They have taken but one step at a time. They first let the public know that there was such a thing as Omega Oil, and they took great pains to make this new fact known, and in doing this they were acting in accordance with the principles of apperception. They first gave the public some experience of Omega Oil, and then tried to get the public to interpret their arguments in the light of that previous experience.

It is not always necessary or even wise to attempt to present all the arguments for a commodity at a single time. It is frequently wise to carry on an educational campaign and to present single arguments. In this way the mind of the possible customer is not crowded with a lot of new and disconnected facts, but each argument has time to be assimilated and to form a part of his experience, and is called up to strengthen and impress each succeeding argument.

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In writing an advertisement the public to be reached must be carefully studied. In exploiting a new commodity the writer should ask himself what there is about his goods which will fall into "prepared soil" on the part of the reader. The reader must first be appealed to by something which he already knows, and thus activity on his part is awakened, and this activity may be made use of for presenting the new elements, which, if presented at first, would have met with no response whatever. Nothing should be presented as something absolutely new, but as an improvement or substitute for something which is well known. The reader's interest can be best awakened by appealing to his past experiences.

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XI

ILLUSIONS OF PERCEPTION

Seeing is Believing

If there is anything in the world that we feel sure of, it is that our senses (eyes, ears, etc.) do not deceive us, but that they present the outside world to us just as it is. Some have been so impressed with the truthfulness of their senses that they have discredited all other sources of knowledge and are unwilling to accept anything as true which they cannot see. "Seeing is believing," and nothing is so convincing as our perceptions.

Many centuries ago it was discovered that under certain conditions even our senses deceived us. This discovery was emphasized and the certainty of any and all our knowledge was questioned till the extremest sort of skepticism prevailed. Such a condition was abnormal and transient, but it certainly is a great shock to us when we discover that under certain conditions our senses are not to be depended upon.

All the sense organs are the product of a long evolution in which the various organs were developed as instruments of communication by means of which we might adjust ourselves to our environments. Of all the sense organs the eye is the most highly developed, and yet it was not

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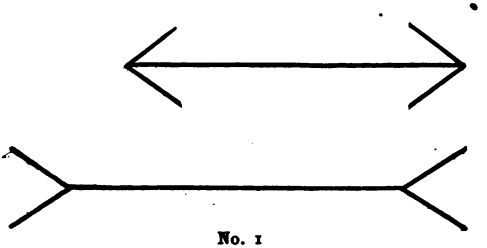
one of the first to be developed. It is marvelously well adjusted for the functions which it has to perform, but it has certain weaknesses and defects which are surprising.

Although each of the sense organs is a source of illusion, this chapter will be confined to a presentation of some of the most striking illusions of the eye.

One of the most glaring of the so-called "optical illusions" is the illusion as to the length of lines.

Illusion of Lengths

We judge distances by the amount of eye movement which is necessary to look from one extremity of the line to the other. Under some circumstances this eye movement is facilitated and under others it is retarded. Lines



No. 1

or distances over which the eye moves readily are underestimated, while those over which the eye moves with difficulty are overestimated.

No. 1 shows two lines of equal length. The line at the top seems much shorter and the explanation is as given above. The arrowheads

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which are turned in stop the eye movement before the end of the line is reached. The arrow-heads which are turned out invite the eye to go even further than the end of the line. I have conducted experiments with very finely constructed instruments which showed that as I looked at the bottom line my eye moved further than it did when I looked at the upper line.

Filled Space Overestimated

When out walking, we are inclined to judge the distance traversed by the amount of effort we have put forth in covering the distance. Any one who has had occasion to walk on railroad ties knows that the distance which he thought he had covered was much greater than the distance which he had actually covered. In walking on the railroad ties, every tie must be noticed and its distance from the next tie must be roughly estimated. There is a constant starting and stopping which calls for the putting forth of an excessive amount of energy. When we walk over a smooth and well-known path there is no starting and stopping at all, but movement is continuous and easy. In the case of these walks the distance covered is judged according to the amount of energy which the limbs must put forth to cover the distance. A similiar illusion occurs when the eye is called upon to judge of distances which, roughly speaking, correspond to the railroad ties and the smooth path.

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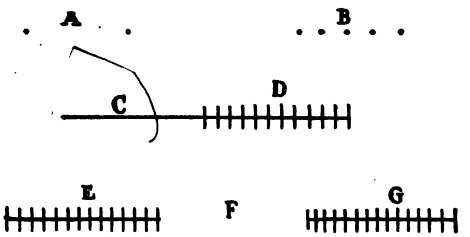
In No. 2 the extents indicated by A and B are equal. A is an open space bounded by two dots, and the eye moves over it readily and without any delays. B is a space bounded by two dots broken by three others, and, although the eye seems to run over them smoothly, there is a slight tendency to notice each dot, and this



No. 2

stopping and starting at each dot requires more energy than it does to move the eye over an empty space of the same size. As seen extents are estimated according to the amount of energy necessary to move the eye over them, B is judged to be greater than A. The other illusions shown in No. 2 are explained in the same way — C appears much shorter than D, and F appears much shorter than E or G.

In No. 3 the two squares are of equal size, but the left-hand one appears to be much the larger. As the eye passes over the upper square there is a tendency to stop at each cross line, and these stoppings and startings cause us to overestimate the size of the square.

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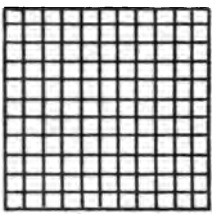
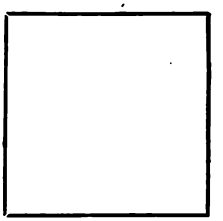
Nos. 2 and 3 are but a few of the examples which might be given to show that filled space is overestimated and that empty space is under-





No. 3

estimated. In every case the cause of the illusion is found in the fact that we base our estimation of extents upon the eye movements which are necessary to look over the field or extent being estimated.

Vertical Lines Appear Long

All eye movements are made by means of the three pairs of muscles which are attached to each eye. They are so adjusted that they can move the eye in any direction, but the pairs of muscles are not symmetrically placed, and as a natural consequence it is harder to move the eyes in certain directions than in others. If you move your eyes from right to left and from left to right, you will observe that it is much easier than it is to move them up and down. Our conclusion from this would be that if we judge distances by eye movement, we would overestimate vertical distances and

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underestimate horizontal distances. Such is the case.

In No. 4 the horizontal and vertical lines are equal, but to most persons the vertical line

No. 4

appears longer. A square does not look to be square, but looks as if its vertical sides were greater than its horizontal ones.

Combination of Illusions

No. 5 combines several different causes of illusions, and the result is very striking. Measurements made along the dotted lines show the horizontal line to be about one-sixth longer than the vertical line. The explanation of this illusion is more difficult to find than that of the figures above given, but it is quite

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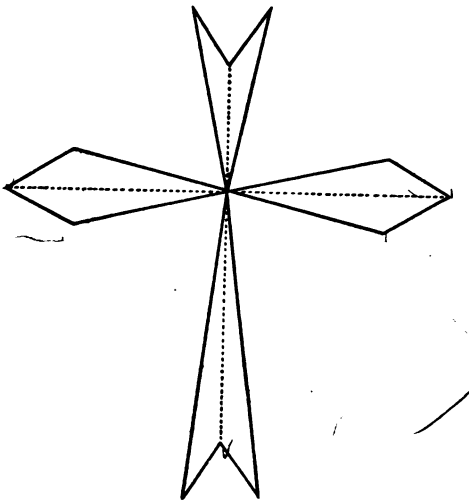
certain that all the explanations given above apply here, and in addition we must mention the "error of expectancy." We expect to see the



No. 5

horizontal arms of a cross shorter than the height of it, and so we are inclined to see it that way even when the reverse is true. The error of expectancy will be more fully discussed in the next chapter.

In certain positions straight lines look crooked and crooked ones look straight.

No. 6 shows straight lines which seem to be decidedly warped. The four horizontal lines are two pairs of straight and parallel lines. The explanation of this illusion is that we un-

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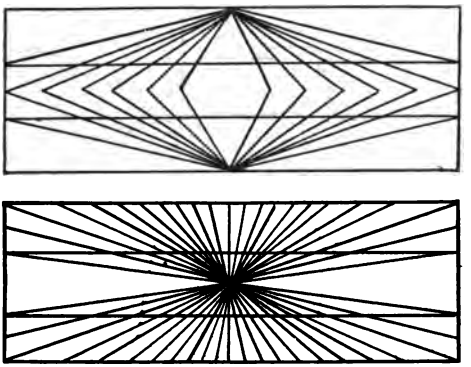
derestimate the size of large angles and overestimate the size of small ones. Each horizontal line is crossed by a number of oblique lines and each oblique line forms two acute and two obtuse angles with each horizontal line. As we overestimate the size of the acute angles and underestimate the size of the large ones,

Straight Lines Appear Crooked



No. 6

the straight lines must appear crooked to allow for these misjudgments.

In certain positions figures which are the same size may appear to be very far from being equal.

No. 7 shows two identical figures, but the lower one appears to be much smaller than the upper one. The explanation of this illusion is somewhat different from the explanation of the other illusions as given above. In comparing the size

Misjudgment of Size

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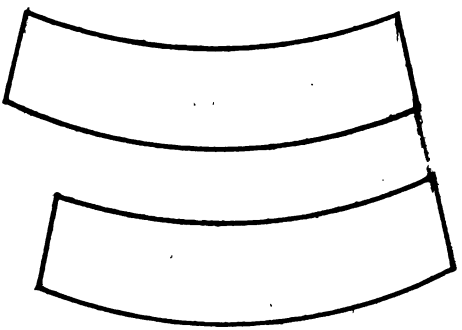
of two objects we ordinarily judge by the comparative size of adjoining areas. In the figures



No. 7

shown the large side of one is next to the small side of the other. We involuntarily compare these adjoining sides, and so the illusion occurs.

There is another class of illusions which do not depend upon eye movement, but upon the way the different rays of light affect the retina of the eye. We "see" objects when the rays of light reflected from them fall upon the retina of the eye. From large objects more light is reflected than from small objects. Because of this we have come to judge objects not only from the eye movement, but also from the size of the object as it is reflected upon the eye. The rays of light reflected from some colors spread themselves out, or "irradiate," and so the image of the object as it is reflected

White Objects Appear Large

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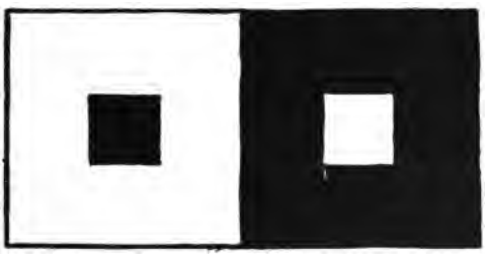
in the eye is greater than the image of an object of the same size but of a color which does not irradiate. For this reason white objects appear larger than black ones. The stock buyers of the West are often compelled to guess at the weight of animals. I am told that they always reduce their "guess" on white animals and add to the



No. 8

apparent size of black ones. A white square looks larger than a black one. In No. 8 the white square to the right appears larger than the black square to the left, although they are of equal size. Nor is this illusion confined to white and black. Red, orange, and yellow objects look larger than objects of the same size which are green and blue. Corpulent people dress themselves in black or in the darker shades of blue or green. Small, thin people dress in white, red, orange, or yellow.

Another source of errors is found in the fact which, technically expressed, is that the eye is

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not corrected for chromatic aberration. The result of this defect in the eye is that certain colors look closer than others. Thus red objects look closer than green ones. I remember looking at a church window which had a red disk in a green background. The red appeared to stand out from the green in such a remarkable manner that I was not satisfied till, after the service was over, I went to the window and felt of it. The red and the green were in the same plane, but, as the red might have stood out, the illusion was not counteracted by my knowledge of the prospective and was very striking.

Tailors and dressmakers have taken advantage of some of the sources of illusions as given above. They know how to cover defects and to produce the desired appearances. Corpulent ladies are not found wearing checks, nor are tall ladies in the habit of wearing vertical stripes. As far as the writer knows, advertisers have never made a conscious effort to profit by illusions in their illustrations and construction of display. It is not the function of this article to suggest how the principles here enunciated might be applied to any particular concrete case, but the ingenious advertiser will find the application. The Purina Mills put up their goods in checkerboard packages, which make the packages look larger than they really are. This illusion is illustrated in No. 3. Ordinarily the illustration

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in advertisements of fountain pens represents the pen in a horizontal position. I have recently noticed some of the illustrations in which the pen is represented in a vertical position. This makes the pen look larger, as is indicated in No. 4.

Appearance of "Bigness"

If the designer of an advertisement desires to give the impression of bigness to an article which he is presenting, he might make use of some or all of the illusions given above. The cut of the article might be so constructed that the eye would move completely over it or even beyond it, as is shown in the lower figure of No. 1. It might be of such a nature that the eye would not move over it readily, as is the case with B, D, E, and G in No. 2. It might be checkered like the left-hand square of No. 3. It might have its dimensions indicated by vertical and not by horizontal lines. It might take advantage of the error of expectation, as is shown in No. 5. Its size might be made to appear greater by the introduction of acute angles, as is shown in No. 6, in which the distance between the two parallel lines is increased and decreased by acute and obtuse angles. The cut might be brought into contrast with some other figure which would give the impression of great size, as is done in the upper figure of No. 7. Finally, the part of the cut

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which is to look large might be colored red, orange, yellow, or white. If several of these principles of illusions could be employed in a single cut the effect would be astonishing.

As will be seen, the cause of all illusions of perception is found in some maladjustment of our normal sense organs. The advertiser is perfectly justified in taking advantage of this defect of ours, and in some cases this could be done to advantage.

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XII

ILLUSIONS OF APPERCEPTION

Confusions of Advertisements

In Evanston, Illinois, two grocery firms are accustomed to advertise on hand-bills which are placed in the morning papers before they are delivered by the carriers. A friend of mine, who was the head of a family, had frequently noticed these bills in his morning paper and, having noticed at some time the name of "Robinson Brothers" on one of the advertisements, had come to the conclusion that all these hand-bills were from Robinson Brothers. On a certain morning Winter's Grocery offered to sell several lines of standard goods at a very great reduction from the ordinary price. As my friend was going down town that morning his wife handed him the hand-bill and asked him to order quite an extensive quantity of the special bargains offered that morning. He took the advertisement, checked off what his wife wanted, and went down town. As he entered Robinson Brothers' store he held Winter's advertisement in his hand and read off to the clerk the order which he was commissioned to make. When the goods were delivered he was taken to task by his wife for ordering the goods at the wrong store and thereby failing to save the special reductions for that day. It so

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happened that the advertisement was still in his pocket. As he took it out and looked at it

No. 1

again he was very much surprised to see "Winter's Grocery" in plain type at the bottom. It was not comforting to him either to remember the way the clerk had smiled when he had held

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the advertisement in his hand and ordered the goods. He even believed he remembered that the cashier stopped work and scanned him and the advertisement while the order was being given.

In the reduced reproduction (No. 1) of a full-page advertisement, which appeared in *Everybody's Magazine*, the Oneita goods occupied three-fourths of the page and the Munsing goods one-fourth. It seems that there should be no confusion about this, but such has not been the case. The Munsing people received a number of letters of inquiry concerning the Oneita union suits. For persons desiring union suits this full-page advertisement was all supposed to be an advertisement issuing from the manufacturers of the Munsing underwear. An advertising manager of a progressive magazine saw this page and, like many other readers, supposed that it was all one. He wrote to the Munsing people, making them rates on the full-page advertisement, and enclosed the page from which the half-tone was made as shown above.

Confusions often arise between advertisements which present the most dissimilar kinds of goods. It might seem surprising that the advertisements for portable houses should be confused with the advertisement of pens, but the following illustration will show how naturally such an error could occur:

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In the reduced reproduction of the full-page advertisement (No. 2) the Conklin Pen Company

No. 2

occupies the upper right-hand quarter page and the lower left-hand quarter page. The upper right-hand quarter is of such a nature that it arrests the reader's attention as he turns over the page. It is of such an indefinite nature that it

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does not direct the attention to anything in particular, but merely arrests it and causes one to look down. It does not draw attention to the lower left-hand quarter more than it does to the lower right-hand quarter. Under these circumstances the lower quarter which appeals to the reader the most strongly receives the most attention. We may for the present assume that the two lower quarters are equally attractive. Under these circumstances it will depend upon the reader himself as to whether he will see the portable houses or the pens. If he has been thinking of portable houses — if he wants a portable house — his attention will immediately be attracted by the advertisement of Mershon & Morley, and he will take it for granted that Mershon & Morley have used the entire right-hand half of the page. This conclusion is not merely hypothetical, for Mershon & Morley have positive proof as to very many such confusions and they are of the opinion that they have received as much benefit from the upper right-hand quarter as the Conklin Pen Company has.

Of two hat firms of Chicago one puts great emphasis on its own name and address, the other emphasizes the style of the hat sold. For convenience' sake we shall call the first firm " A " and the second " B." Hatter A has made his name so well known that when a possible customer sees an advertisement of hats he at once begins to

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think of A. Last summer Hatter B advertised a particular style of hat very extensively. His name was on all the advertisements, of course. The name, however, was not the important or the emphasized thing. After they had read the advertisement through many persons still supposed that it was A's advertisement. Hatter A is not willing to have his name or that of his competitor mentioned, for he does not desire to see the present condition changed. His position can be appreciated when we learn that he sold over twenty dozen hats last summer to persons who thought they were getting the hat which they had seen advertised by B.

I have frequently observed that people misread advertisements. In some cases the mistakes are astonishing. After a young lady had completed "looking through" a magazine, I asked her to write down as full an account as possible of some of the advertisements in the magazine. Here is what she wrote: "What sensations are more agreeable after exercise than a hard rub with a towel and a rub with Armour's toilet soap, and a dash of water? Armour's soap may not be very valuable, but it is very refreshing after exercise. Armour's soap may be bought at any store at five or ten cents a bar." What she had read was the following: "What sensations are more agreeable than those following some good, quick exercise, a rub with a rough towel, a scrub with

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Ivory soap and a dash of cold water? . . . If the Ivory soap is not positively essential, it is at least delightfully cleansing," etc. I asked several hundred persons to write down a description of the advertisements which they had just read. This confusion of Armour's and Ivory soap is but one of scores of similar confusions which I discovered.

At an international congress of psychologists held in Munich, in 1896, an alleged " photograph " of the human brain (No. 3) was exhibited.

No. 3

Ambiguous Figures

All those present were much interested in the structure and functions of the brain. Many of them, at first sight, saw nothing unusual about the picture, but observed the position of the various convolutions and fissures of the brain. Later it dawned upon them that it was not a photograph of the brain at all, but was a group of naked babies. I have since that time shown the picture to various persons and have noticed that those who are

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familiar with the brain first see a brain, but ot persons are likely to see the babies at once.

The first time I saw this photograph of a b. I did not notice the babies for several secon. then for some time I could see it as either a br or a group of babies. Now I find that I can. see it as a brain at all, but every time I look at I see the babies and there is scarcely any resen blance to a brain there.

The following cut (No. 4) differs from the one last discussed in this particular. I can see it equally well in two different ways.

No. 4

If I look away from it and think how it should be to represent a duck and then turn my eyes upon it, behold — it is a duck. If I think how it should be to represent a rabbit and then look at it, it ceases to look like a duck and is the likeness of a rabbit. The figure itself may represent equally well either a rabbit or a duck, but cannot possibly suggest both to me at the same time. If I continue to look at it steadily for some minutes it changes from a rabbit to a duck and then back

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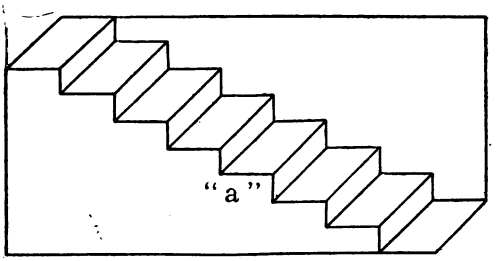
a rabbit. When I see it as one it does not seem possible that it could ever look like the other; for the two things are so totally different in appearance.

The following illustration (No. 5) differs from the one given immediately above in several im-



No. 5

portant particulars. The one given above is seen equally well in either of two ways, and we seem to have no preference as to which way we shall see it. The one given below can be seen in at least four different ways, but we see it much more readily in one way than in any other.

The easiest way to interpret this figure is to regard it as a representation of a staircase as seen from above. It is quite possible, however, to see it as a representation of the same stairs as seen from below. This latter interpretation is made easier if you think just how the stairs would look if seen from below, and if at the same time you direct your eye to the point marked " a " in the cut. It is possible to interpret the cut, not as a

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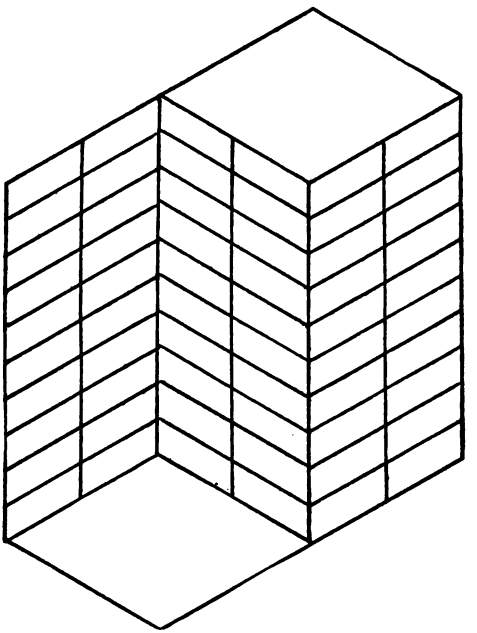
staircase at all, but as a strip of cardboard bent at right angles like an accordion plait and situated in front of the apparent background. It is diffi-



No. 6

cult to " see " the figure this way. It is still more difficult to see the figure as a plane surface composed of straight lines without any perspective. This fourth interpretation is the one that would apparently be the most natural, for it is the one which takes the cut for just what it is and adds nothing to it. It might be added that the angles

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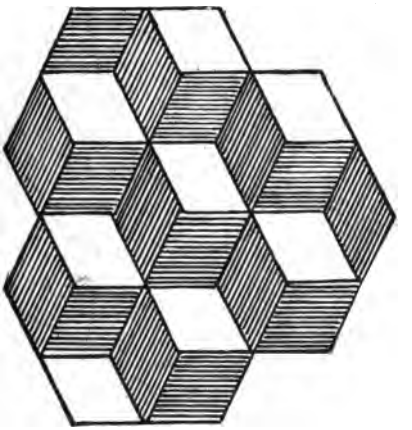
in the staircase figure may be seen as right angles, acute angles, or oblique angles.

No. 6 is like the previous illustrations in that it can be seen in more than one way, but it is different in that the figure seems to change under the eye



No. 7

more rapidly than the others. It assumes two or three different appearances in a very few seconds.

These changes are assisted by moving the eye from one part of the figure to another. In looking at solid figures or bodies our eyes usually rest on the nearest edge or surface. It comes about in this way that the lines at which we look are very likely to appear to be the nearest edge or surface of the solid.

No. 7 consists of a group of either six or seven blocks. If it is looked at steadily for some sec-

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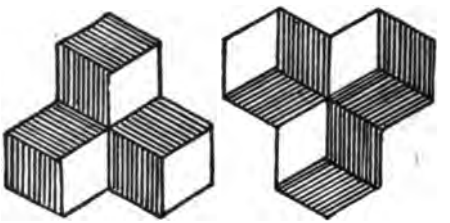
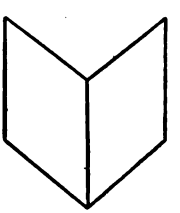
onds, the blocks seem to fall and to arrange themselves in a new way. If at first there were but six blocks, there may be seven there after they have fallen. Many people find it very difficult to count the blocks, for while they are counting, the number changes. If you look at No. 7*a* and hold an image of it in your mind while you count the blocks in No. 7 you will probably find six blocks. If, however, you first look at No.



No. 7a No. 7b

7*b* and retain its image in your mind you will be able to find seven blocks in No. 7. If the desired results are not secured, turn the page upside-down and the blocks will then certainly "fall."



No. 8

No. 8, at first sight, appears to most people as a book which is half opened and turned in such

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a way that the cover alone is visible. To some it will appear as if the book was opened toward them and as if two of the pages were visible. If we try to think how a book should look when opened and turned away from us, and if we then look at the figure, it will appear to represent the book of which we are thinking and also in the position in which we imagined it.

The upper or feathered end of the arrow (No. 9) is identical with No. 8 and yet it appears to

No. 9

be flat, while that one appeared as a solid. If we cover up the shaft and head of the arrow as shown in this figure, we can then see the top of the figure as a book. If we think of it as the end of an arrow it is flat, but if we think of it as a book it immediately appears as a solid drawn in perspective.

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If I put on red glasses and then look at a landscape, all objects appear red to me. If I put on green glasses all objects appear green. The objects are colored by the glasses which were before my eyes. In a similar way, by apperception, *the thoughts which are in my mind color all the objects at which I look.* We see things through our own eyes and with our own minds. This is equivalent to saying that *all we see is changed by the thoughts which are in our minds when we look.* It is also equivalent to saying that *we see everything in relation to our own previous experience.* Although the grass is green I am unable to see it as green till I remove the red glasses. The rose may be red, but it will not appear so to me till I take off the green glasses. In a similar way I fail to see the green grass when I am thinking of the red rose and I fail to see the red rose when I am thinking of the green grass, although both are present all the time. *We see most easily those things of which we happen to be thinking or of which we have had previous experience, but we see with difficulty those things of which we have had no previous experience.*

Principles Involved

For the practical advertiser the theoretical discussion of the illusions of apperception has a special importance, as it assists him to discern the causes of such illusions and to avoid them in his advertisements. The principal cause of all illu-

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sions of apperception is found in the fact that *the mind of the reader is not prepared for the reception of the case as presented.* The second cause of such illusions is that the presentation of the case is not as clear and distinct as it should be. The first of these facts is the peculiar and distinctive cause of most illusions of apperception. The reader's mind may be unprepared either because it is distracted by a competing thought or because the material presented is entirely new. The presentation may be lacking in clearness because in some particular it is ambiguous.

Practical Application

By observing the part which these two causes played in the illusions given above we are better prepared to understand and therefore to avoid such illusions. The householder who misread Robinson for Winter had his mind preoccupied with the thought of Robinson. Winter had not succeeded in occupying a place in his mind, while Robinson had. On the other hand, Robinson's and Winter's advertisements look as much alike as two peas and neither has a characteristic feature which would help to identify it.

The readers of *Everybody's Magazine* looked at the lower right-hand corner of the page and read "The N. W. Knitting Company, Minneapolis." With this thought in mind they looked at the Oneita goods, but failed to notice that they were not sold by the N. W. Knitting Company. The

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Oneita people are in part responsible for the illusion in that they allowed their advertisement to appear without an address and on a page with a similar advertisement which has an address. The more recent advertisements of the Oneita union suits have an address given and therefore are not so subject to illusions of this sort.

The confusion by which readers supposed that the portable houses were presented by a full half-page advertisement is a typical illusion of apperception. The readers had their minds preoccupied by the thought of portable houses, and so the attention went to portable houses, and not to "The Pen That Fills Itself." The Conklin Pen Company did not make it perfectly clear that the hand was pointing to their space.

In the confusion of hats referred to, Hatter A had made his name so familiar to the residents of his city that when they read a hat advertisement they did it with their minds preoccupied with the thought that it was A's advertisement. It came about in this way that when they read B's advertisement they read it as A's and failed to notice B's name, which was given at the bottom. It is quite possible that B might have greatly reduced the number of confusions if he had put more emphasis upon his own name and address.

The young lady who misread Armour's for Ivory had been influenced by extensive advertisements of Armour's which had appeared in her

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town. She had associated the name of Armour and soap so closely together that when she read of soap she naturally assumed that it was Armour's and failed to see Ivory, just as the inexperienced proofreader reads the proof as he thinks it ought to be and fails to observe some of the most glaring errors. It should also be observed that the soap advertisement did not emphasize the name of Ivory at all.

The figures given above illustrate the same principles of illusions of apperception, but they make it clearer than any confusion of concrete advertisements can possibly do. In most, if not in all, of the figures the reader can voluntarily preëmpt his mind with a thought and then can see in the figure that of which he is thinking. He can in this way interpret each figure in two or more ways. By means of these figures we can see the part the mind adds to a sensation when it interprets a written, printed, or drawn symbol. These figures also show the need of clear and distinct presentation. They are extremely ambiguous, and can with equal ease be interpreted in two or more ways. With slight changes all of these figures could be remodeled so that it would be much more difficult to interpret them in any way except the one which the author desired.

That firm which does the most and the best advertising is the one that preëmpts the minds of

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the possible customers and so gets the benefit of more advertisements than it pays for. The firms that advertise extensively and do not fail to put the proper emphasis on their names and addresses are the firms that profit most by confusions. New firms and firms that put little emphasis on their names and addresses would be much surprised if they knew how many possible customers read their advertisements and still fail to notice who they are.

Avoid Confusions

Many advertisers believe that they should put all their emphasis on the quality of the goods. They assume that if any one wants the goods thus presented they will take the trouble to ascertain the brand of the goods, the name of the firm, and its address. Such a theory sounds well, but the instances of confusion cited above indicate the weakness of the theory when applied to specific advertisements.

In this chapter we have confined our attention to illusions in which the reader has confused one advertisement or one figure for another. Ordinarily illusions do not go to this extreme, but are confined to confusions and misunderstandings as to the specific arguments of the advertisements. Since we have positive evidence that these extreme illusions are not uncommon, we can well believe that illusions of a less extreme but serious nature are of all too frequent occurrence. The

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number of such illusions would be materially decreased if the writers of advertisements would see to it that the minds of the possible customers are prepared for the argument which they are about to write and if they would present their arguments clearly and distinctly.

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XIII

PERSONAL DIFFERENCES IN MENTAL IMAGERY

Classes of Mental Imagery

YESTERDAY I looked in at a shop window where the current magazines were displayed. I saw the front outer cover of over a score of them. Now, as I sit in my study, miles away from that window, I can still see the magazines with my "mind's eye;" that is to say, I can form a mental image of the window and the magazines. I can describe some of the covers accurately as to color, shape, type, etc. I know that there were several magazines off to the left side of the window, but all I can see of them now is the barest outline. They are so indistinct that I cannot tell what they are at all. My mental image of them is very indistinct.

But recently I was talking with a friend while a company of young people in an adjoining room was playing on the piano and violin and singing college songs. As I sit here I can imagine how my friend's voice sounded; I can hear in imagination how the piano and the violin sounded; I can hear in imagination the tunes which they were singing; that is to say, I can form a mental image of the sounds which I had previously heard. I notice, however, that my mental image

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is not so distinct and pronounced as the original perception. I cannot form a mental image of some of the notes which I heard from the violin. Only the more striking parts of the tunes seem to be plain, and even they seem to be quite low and of much less volume than the originals.

Only an hour ago I ate my breakfast. The odor and taste of the coffee were at that time very pleasing to me. Now I can imagine how it smelt and tasted, but the images of it are not very vivid and are not strong enough to give me any pleasure in recalling them.

Last night I was on the ice playing hockey. The exercise was very vigorous and exciting. At the time I did not stop to think how it felt to "put the puck," but I must have felt the exertion of my muscles as I performed the act. Now I can form a mental image of the act; I can feel my muscles as they make the strain necessary for the performance. I was perspiring when I left the pond and soon my woolen underwear became excessively unpleasant. I felt the unpleasant contact on my skin at that time, and now I can form a mental image of the sensation, which is so strong that it makes me want to stop writing to scratch.

As is indicated by the examples given above, I can form a mental image of that which I have seen, heard, tasted, smelt, felt (in my muscles), or touched (with my skin). In general it might

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be said that we can form a mental image of anything which we have ever perceived. There are many exceptions to this statement, as will be shown later.

Almost all of our dreams and reveries and a large part of our more serious thinking are composed of a succession of these mental images of things which we have previously experienced. We cannot see the images in the mind of our neighbor, but we are likely to suppose that his thinking is very much like our own. It was formerly supposed that such was the case. It was assumed that the normal mind could form images of everything which it had experienced. It was further assumed that there were no personal differences as to the clearness and vividness of such mental images.

Personal Differences Discovered

In 1880 Francis Galton discovered that there was a great difference in individuals in their ability to form these mental images. He found that some persons could form mental images which were almost as vivid and strong as the original perception, while for others the past was veiled in indistinctness. He also found that certain persons could form mental images of one class of perceptions, but could form no mental images of other classes. Thus, one man could not imagine how his friends looked when he was absent from them; another

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could not imagine how a piano sounded when the piano was out of his hearing.

Prof. William James, of Harvard University, continued the investigations begun by Mr. Galton. He collected papers from hundreds of persons in which each one described his own image of his breakfast table. One who is a good visualizer writes:

"This morning's breakfast table is both dim and bright: it is dim if I try to think of it when my eyes are open upon any object; it is perfectly clear and bright if I think of it with my eyes closed. All the objects are clear at once, yet when I confine my attention to any one object it becomes far more distinct. I have more power to recall color than any other one thing; if, for example, I were to recall a plate decorated with flowers, I could reproduce in a drawing the exact tones, etc. The color of anything that was on the table is perfectly vivid. There is very little limit to the extent of my images: I can see all four sides of a room; I can see all four sides of two, three, four or even more rooms with such distinctness that if you should ask me what was in any particular place in any one, or ask me to count the chairs, etc., I could do it without the least hesitation. The more I learn by heart the more clearly do I see images of my pages. Even before I can recite the lines I see them so that I could give them very slowly, word

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for word, but my mind is so occupied in looking at my printed page that I have no idea of what I am saying, of the sense of it, etc. When I first found myself doing this, I used to think it was merely because I knew the lines imperfectly, but I have quite convinced myself that I really do see an image. The strongest proof that such is really the fact is, I think, the following:

"I can look down the mentally seen page and see the words that *commence* all the lines, and from any one of these words I can continue the line. I find this much easier to do if the words begin in a straight line than if there are breaks. Example:

"*Etant fait* . . .
"*Tous* . . .
"*A des* . . .
"*Que fit* . . .
"*Céres* . . .
"*Avec* . . .
"*Un fleur* . . .
"*Comme* . . .
"(La Fontaine 8, iv.)"

Those who are poor visualizers are likely to suspect the writer of the above paper as exaggerating the vividness of his visual images, yet there is every reason to suppose that there is no exaggeration about it.

One who is a poor visualizer writes:

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"My ability to form mental images seems, from what I have studied of other people's images, to be defective and somewhat peculiar. The process by which I remember any particular event is not by any distinct images, but a sort of panorama, the faintest impressions of which are perceptible through a thick fog. I cannot shut my eyes and get a distinct image of any one, although I used to be able to a few years ago, and the faculty seems to have gradually slipped away. In my most vivid dreams, where the events appear like the most real facts, I am often troubled with a dimness of sight which causes the image to appear indistinct. To come to the question of the breakfast table, there is nothing definite about it. Everything is vague. I cannot say *what* I see; could not possibly count the chairs, but I happen to know that there are ten. I see nothing in detail. The chief thing is a general impression that I cannot tell what I do see. The color is about the same, as far as I can recall it, only very much washed out. Perhaps the only color I can see at all distinctly is that of the tablecloth, and I could probably see the color of the wall-paper if I could remember what color it was."

Every year I ask each of my students in psychology to write out in full a description of his mental image of his breakfast table, a railroad train, and a football game. In these papers are

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examples of as good and as poor visualizers as those given from the papers collected by Professor James. I have found that there is not only a personal difference in the ability to form *visual* images, but that the same differences exist for the other classes of perceptions. One student who has strong auditory imagery writes as follows:

Investigations Continued

"When I think of the breakfast table I do not seem to have a clear visual image of it. I can see the length of it, the three chairs,—though I can't tell the color or shape of these,—the white cloth and something on it, but I can't see the pattern of the dishes or any of the food. I can very plainly hear the rattle of the dishes and of the silver and above this hear the conversation, also the other noises, such as a train which passes every morning while we are at breakfast. Again in a football game I distinctly hear the noise, but do not see clearly anything or anybody. I hear the stillness when every one is intent and then the loud cheering. Here I notice the differences of pitch and tone."

I had read that some people were unable to imagine sounds which they had heard, but it had not impressed me, for I had supposed that such persons were great exceptions. I was truly surprised when I found so many of my

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students writing papers similar to those from which extracts are here given:

"My mental imagery is visual, as I seem to see things and not to hear, feel, or smell them. The element of sound seems practically never to enter in. When I think of a breakfast table or a football game I have a distinct image. I see colors, but hear no sound."

Another, in describing his image of a railroad train, writes:

"I am not able to state whether I hear the train or not. I am inclined to think that it is a noiseless one. It is hard for me to conceive of the sound of a bell, for instance. I can see the bell move to and fro, and for an instant seem to hear the ding, dong; but it is gone before I can identify it. When I try to conceive of shouts I am like one groping in the dark. I cannot possibly retain the conception of a sound for any length of time."

Another, who seems to have no vivid images of any kind, writes:

"When I recall the breakfast table I see it and the persons around it. The number of them is distinct, for there is only one of them on each side of the table. But they seem like mere objects in space. Only when I think of each separately do I clearly see them. As for the table, all I see is a general whiteness, interspersed with objects. I hear nothing at all, and

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indeed the whole thing is so indistinct it bewilders me when I think of it. My mental imagery is very vague and hazy, unless I have previously taken special notice of what I now have an image. For instance, when I have an image of a certain person, I cannot tell his particular characteristics unless my attention was formerly directed to them."

Another writes:

"There is no sound in connection with any image. In remembering I call up an incident and gradually fill out the details. I can very seldom recall how anything sounds. One sound from the play 'Robespierre,' by Henry Irving, which I heard about two years ago and which I could recall some time afterward, I have been unable to recall this fall, though I have tried to do so. I can see the scene quite perfectly, the position of the actors and stage setting, even the action of a player who brought out the sound."

Quite a large proportion of persons find it impossible to imagine motion at all. As they think of a football game all the players are standing stock still; they are as they are represented in a photograph. They are in the act of running, but no motion is represented. Likewise, the banners and streamers are all motionless. They find it impossible to think of such a thing as motion. Others find that the motions are the most vivid part of their images. What

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they remember of a scene is principally movement. One writes:

"When the word 'breakfast table' was given out I saw our breakfast table at home, especially the table and the white tablecloth. The cloth seemed to be the most distinct object. I can see each one in his place at the table. I can see no color except that of the tablecloth. The dishes are there, but are very indistinct. I cannot hear the rattle of the dishes or the voices very distinctly; the voices seem much louder than the dishes, but neither are very clear. I can feel the motions which I make during the breakfast hour. I feel myself come in, sit down, and begin to eat. I can see the motions of those about me quite plainly. I believe the feeling of motion was the most distinct feeling I had. When the word 'railroad train' was given, I saw the train very plainly just stopping in front of the depot. I saw the people getting on the train; these people were very indistinct. It is their motions rather than the people themselves which I see. I can feel myself getting on the train, finding a seat, and sitting down. I cannot hear the noise of the train, but can hear rather indistinctly the conductor calling the stations. I believe my mental imagery is more *motile* [of movement] than anything else. Although I can see some things quite plainly, I seem to feel the movements most distinctly."

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A very few in describing their images of the breakfast table made special mention of the taste of the food and of its odor. I have discovered no one whose prevailing imagery is for either taste or smell. With very many the image of touch is very vivid. They can imagine just how velvet feels, how a fly feels on one's nose, the discomfort of a tight shoe, and the pleasure of stroking a smooth marble surface.

Literature and Mental Imagery

It is a well-observed fact that different classes of society think differently and that arguments which would appeal to one class would be worthless with another. A man's occupation, his age, his environment, etc., make a difference in his manner of thinking, and in the motives which prompt him to action. In appealing to people we ordinarily think of these conditions and formulate our argument in accorddance with these motives. That is to say, we address ourselves to a particular social or industrial class. The study of mental imagery makes it evident that there are personal differences apart from differences due to environment, but which are inherent in the individual. Some well-educated persons are so destitute of visual images that they are utterly unable to appreciate the description of a scene when it is described in visual terms. Many persons find themselves bored even by Victor Hugo's description of the

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scene of the battle of Waterloo. To them the whole scene is unimaginable and therefore unintelligible and uninteresting. I have been interested in observing that the authors which are read with universal delight are those who appeal to all the various classes of mental imagery. Dickens, Sir Walter Scott, Tennyson, Washington Irving, and many of the authors who are universally appreciated, appeal to and awaken many auditory images as well as images of taste, smell, touch, and motion; Browning appeals most often and most exclusively to visual images. It is quite certain that a person can best be appealed to through his dominating imagery. A person who has visual images that are very clear and distinct appreciates descriptions of scenes. A person with auditory imagery delights in having auditory images awakened. The same holds true for the other classes of mental imagery. Of all the writings of Washington Irving "The Legend of Sleepy Hollow" is one of the favorites. One element of strength in this is the manner in which the author succeeds in awakening the different classes of mental imagery in the reader. Take, for example, the following passages, in which the "eye-minded" reader sees the scene while the "ear-minded" reader hears that which is being described:

"Not far from this village, perhaps about two miles, there is a little valley, or rather lap

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of land, among high hills, which is one of the quietest places in all the world. A small brook glides through it, with just murmur enough to lull one to repose; and the occasional whistle of a quail, or tapping of a woodpecker, is almost the only sound that ever breaks in on the uniform tranquility. . . . I had wandered into it at noontime, when all nature is peculiarly quiet, and was startled by the roar of my own gun as it broke the Sabbath stillness around and was prolonged and reverberated by the angry echoes."

As an example of the way in which Washington Irving could awaken images of taste and of odor, examine the following, taken from the same selection:

"The pedagogue's mouth watered as he looked upon this sumptuous promise of luxurious winter fare. In his devouring mind's eye he pictured to himself every roasting pig running about with a pudding in his belly and an apple in his mouth; the pigeons were snugly put to bed in a comfortable pie, and tucked in with a coverlet of crust; the geese were swimming in their own gravy, and the ducks pairing cosily in dishes, like snug married couples, with a decent competency of onion sauce. In the porkers he saw carved out the future sleek side of bacon and juicy, relishing ham; not a turkey but he beheld daintily trussed up, with its gizzard under its

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wing and peradventure, a necklace of savory sausage," etc.

This author is not regarded as one of the greatest, but certainly the fascination for his writings is found in part in the fact that in his imagination he could *see* the woodland, he could *hear* the murmur of the brook, he could *taste* the pies, he could *smell* the fragrance of the orchards, he could *feel* the bumps as Ichabod Crane rode the old horse Gunpowder, he could *feel* the muscle contract in the brawny arms of Brom Bones. Having all these images distinct himself, he depicted them so well that similar images are awakened in us in as far as we are capable of imagining what he described. It is not to be supposed that Washington Irving intentionally tried to awaken in his readers these various classes of images, but he did unconsciously what it might be wise for us to do consciously.

Practical Application

An advertiser, as well as any other author, might do well to examine his own writings to see what sort of images he is appealing to. It is in general best to appeal to as many different classes of images as possible, for in this way variety is given and each reader is appealed to in the sort of imagery in which he thinks most readily and by means of which he is most easily influenced.

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XIV

PRACTICAL APPLICATION OF MENTAL IMAGERY

THE young men and women of to-day are accused of being poorer spellers than their parents. The reasons for this may be many, but one has direct bearing upon our subject of discussion. Formerly children in school spelled orally. They saw the word printed in their books; they did more or less writing, and then felt the movements of their hands and arms as they wrote; they were called upon to spell the word in class orally, and so heard how it sounded. They thus had three "cues" for the word — they saw it, they felt it, and they heard it. When they were called upon to spell a word they had all of these three cues to assist them in remembering how it was spelled, *i. e.*, to assist them in forming an image of it. Some years ago oral spelling was displaced by written spelling. In this way one of the cues was abandoned, — the oral one, — and it was found that pupils made more mistakes in writing than those who had spelled orally. Because of this fact oral spelling is being brought back to the schoolroom. An attempt is being made to have the scholars see, hear, and feel the word, and, in this way, their spelling will be better than if they omitted

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one of the three processes. The scholar knows the word better and can form a more distinct image of it if he has these three cues to assist him.

In a former age the seller, the buyer, and the commodity were brought together. The seller described and exhibited his wares. The buyer saw the goods, heard of them, tasted them, smelt them, felt, and lifted them. He tested them by means of every sense organ to which they could appeal. In this way the buyer became acquainted with the goods. His perception of them was as complete as it could be made. In these latter days the market place has given way to the office. The consequent separation of buyer, seller, and commodity made the commercial traveler with his sample case seem a necessity. But, with the growing volume of business, and with the increased need for more economical forms of transacting business, the printed page, as a form of advertisement, has superseded the market place, and is, in many cases, displacing the commercial traveler. In this transition from the market place and the commercial traveler to the printed page, the advertiser must be on his guard to preserve as many as possible of the good features of the older institutions. In the two older forms of barter all the senses of the purchaser were appealed to, if possible, and in addition to this the

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word of mouth of the seller was added to increase the impressions and to call special attention to the strong features of the commodity. In the printed page the word of mouth is the only feature which is of necessity entirely absent. Indeed, the printed page cannot appeal directly to any of the senses except the eye, but the argument may be of such a nature that the reader's senses are appealed to indirectly through his imagination.

Weaknesses in Advertisements

One of the great weaknesses of the present-day advertising is found in the fact that the writer of the advertisement fails to appeal thus indirectly to the senses. How many advertisers describe a piano so vividly that the reader can *hear* it? How many food products are so described that the reader can *taste* the food? How many advertisements describe a perfume so that the reader can *smell* it? How many describe an undergarment so that the reader can *feel* the pleasant contact with his body? Many advertisers seem never to have thought of this, and make no attempt at such descriptions.

The cause of this deficiency is twofold. In the first place, it is not easy in type to appeal to any other sense than that of sight. Other than visual images are difficult to awaken when the means employed is the printed page. In the second place, the individual writers are defi-

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cient in certain forms of mental imagery, and therefore are not adepts in describing articles in terms which to themselves are not significant. This second ground for failure in writing effective advertisements will be made clear by the following examples taken from good and from poor advertisements. "Good" and "poor" are used here in a very narrow sense. For convenience' sake these advertisements are called good which are good according to the single standard here under consideration.

Advertisements of Pianos

A piano is primarily not a thing to look at or an object for profitable investment, but it is a *musical* instrument. It might be beautiful and cheap, but still be very undesirable. The chief thing about a piano is the quality of its tone. Many advertisers of pianos do not seem to have the slightest appreciation of this fact. As a first example of this, read the following advertisement (No. 1), in which an entire advertisement of the Emerson piano is reproduced exactly, with the single exception that the word "incubator" is substituted for "piano."

The Emerson advertisement is not peculiar because of its deficiency. In fact, the majority of piano advertisements are equally poor. The following advertisement of the Vose (No. 2) belongs to the same class. In it the word "camera" is substituted for "piano."

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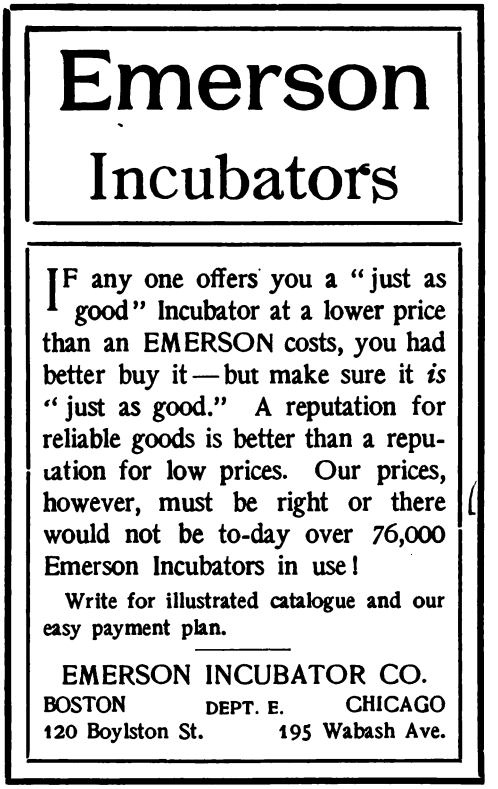
What has been said of these two advertisements would hold true of the advertisements



No. 1

in the current issues of the magazines of the Gabler piano, and of many others.

These advertisements apply equally well for paintings, perfumes, fountain-pens, bicycles,

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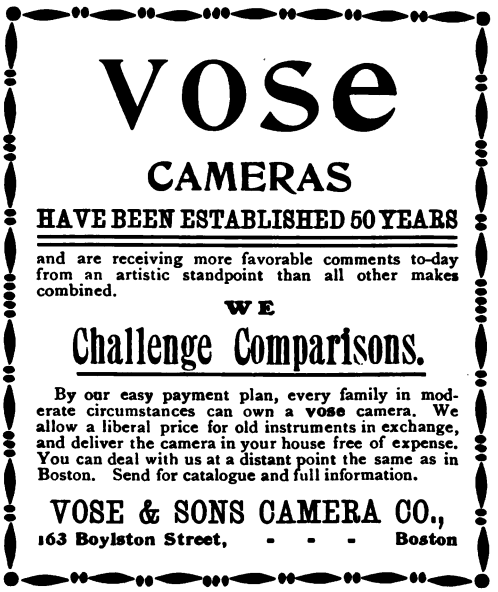
snuff, or sausages, and would be equally poor if used to advertise any of them. They are not specific, and do not describe or refer in any way to the essential characteristic of a pianc.



No. 2

They awaken no images of sound; they do not make us hear the piano in our imagination.

The advertisement of the Blasius (No. 3) is an attempt in the right direction. The musical scale suggests music specifically; the picture of the piano recalls the sounds of the music to a certain extent; the lady at the piano suggests

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music, for she is not turning around to be looked at (*cf.* an advertisement of Ivers & Pond pianos in the current magazines), but is intent upon her playing. The text also uses words whose sole function is to awaken images of sound. These expressions appear in the advertisement: "Excellent tone," "the sweetest tone I ever

No. 3

heard," "sweet and melodious in tone," "like a grand church organ for power and volume; and a brilliant, sweet-toned piano, in one."

The advertisement of the Packard Piano (No. 4) says more in three inches than many advertisements of pianos say in a whole page. "Lasting Tone-beauty" is put in display type. Two children are intent upon their playing, and two others seem to be appreciating the music. This piano is represented by word and

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by illustration as doing just what we want a piano to do. It is furnishing pleasing amusement to all those who *hear* it.

The man who cannot appreciate the tone

No. 4

of a piano, and who can form but indistinct images of musical tones, is not a good man to write the advertisements for a music house. He might improve his style of writing by reading selections in which the author shows by his writing that he hears in imagination what he describes and his descriptions are so vivid that he makes us hear it too.

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Advertisements of Foods

In determining which foods I shall eat it is a matter of some importance to know how the goods are manufactured, what the price is, how it is prepared for the table, and whether it is nourishing or harmful to my system. The one essential element, however, is the *taste*. When I look over a bill of fare I seek out what I think will taste good. When I order groceries I order what pleases and tickles my palate. I want the food that makes me smack my lips, that makes my mouth water. Under these circumstances all other considerations are minimized to the extreme.

In advertisements of food products I have been surprised to note that many foods are advertised as if they had no taste at all. One would suppose that the food was to be taken by means of a hypodermic injection and not by the ordinary process of taking the food into the mouth and hence into contact with the organ of taste. The advertisers seem to be at a loss to know what to say about their foods, and so have, in many cases, expressed themselves in such general terms that their advertisements could be applied equally well to almost any product whatever. The two reproduced advertisements (Nos. 5 and 6), taken from recent issues of household periodicals, are samples of such meaningless generalities.

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These two advertisements are reproduced exactly with the single exception that the names of the commodities have been changed in each case. I would suggest to these firms that they might improve their advertisements by leaving off the name of the goods entirely and then offer a prize to the person who could guess what

No. 5

they were advertisements of, or else offer the prize for the one who should suggest the largest list of goods which could be equally well presented by these advertisements.

Some advertisers of food are evidently chronic dyspeptics and take it for granted that all others are in the same condition. They have nothing to say about their foods except that they have wonderful medicinal properties. To me a food

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which is only healthful savors of hospitals and sickrooms, and is something which a well man or woman would not want.

No. 6

There are advertisers who appreciate the epicurean tendency of the ordinary man and woman. They describe foods in such a way that we immediately want what they describe.

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That very old proverb about reaching the heart of a man is best exemplified with

NABISCO Sugar Wafers

A Fairy Sandwich with an upper and lower crust of indescribable delicacy, separated with a creamy flavoring of

Lemon, Orange, Chocolate, Vanilla, Strawberry, Raspberry, or Mint.

Ask for your favorite flavor

NATIONAL BISCUIT COMPANY

No. 7

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Of all the advertisements in current magazines perhaps the one of the National Biscuit Company reproduced herewith (No. 7) presents their product in the most tempting manner. According to this advertisement "Nabisco" is *something to be eaten*, and it is presented in such a way that it would seem that one cannot read of it without being convinced that it is good and something that he wants — and the quicker he gets it the better.

This advertisement has character and individuality. Its statements could not be applied to anything but foods or, indeed, to anything but Nabisco. They do not say that Nabisco is wholesome, but when I read them I feel sure that Nabisco would agree with me.

Advertisements in Clothing

The skin is the sense organ by means of which we receive sensations of pressure, touch, heat, and cold, and it is the organ which gives more "comfortable" and "uncomfortable" feelings than any other. Having experienced touch, pressure, cold, heat, and the comforts and pains connected with our skin, we should be able to imagine such sensations, and to seek the pleasant and to avoid the unpleasant. Some people are very deficient in imagining the sensations which we receive from the skin, and, strange to say, not a few of these deficient individuals have been put in charge

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of the advertisements which have to do with these very sensations. One of the prominent characteristics of all clothing is that it gives

No. 8

us either a pleasant or an unpleasant sensation by means of its contact with our bodies.

Shoes are sold for different prices; therefore the price is to be considered. They are things that wear out sooner or later; we therefore

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must consider their durability. They are things that we see with our eyes; therefore their appearance — style — must be considered. Lastly,

No. 9

— but not last considered by the purchaser,— shoes come into close contact with our skins, and sensations that are either pleasant or painful result; we must therefore consider the fit and comfort of the shoe. A very common defi-

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ciency in shoe advertisements is found in the failure of the advertiser to *imagine the comfort of the shoe advertised*, and to express it in his argument. As a typical advertisement of this sort consider the advertisement of the Crawford shoe (No. 8). It might well be the advertisment of a leather pocket-book if a few insignificant changes were made.

In the advertisement of the Crossett shoes (No. 9) the text matter is most excellent. The writer is one who can appreciate the comfort of a good-fitting and easy shoe; he has been able to imagine the sensation, and he has described it so vividly that the reader feels in imagination the comfort of a Crossett shoe.

Omega Oil is a liniment that is supposed to increase the pleasant sensations which we receive through the skin. The writer of this advertisement seems to have been able to imagine the uncomfortable feeling of sore feet, and of the comfort which his oil would secure. The artist who drew the sore feet (No. 10) surely could appreciate the situation in a striking manner. The artist does not depict and the author does not describe what he cannot imagine.

Omega Oil is not only a thing which can be applied to and felt by the skin, but it is also a thing that can be seen and smelt. To many it might seem a little thing that Omega Oil is

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green, but that single advertisement, "It's Green" (No. 11), has done a great deal to help

No. 10

the readers to form a distinct image of the liniment. The man who cares but little for odors would not have taken so much space to say

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that it "smells nice" (No. 12). In these three advertisements and others like them the adver-

No. 11

tiser of Omega Oil has shown his appreciation of the human mind to which he has been appealing. It may, however, be questionable whether such minor considerations for liniment as color

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and odor should receive so much emphasis as is given them here.

As was shown in the preceding chapter, many people are deficient in certain forms of imagery.

Deficient Imagination

Most people can imagine with some degree of satisfaction how things look. Not quite so many can imagine how things sound or feel. Very many have difficulty in imagining how things taste and smell. This would be sufficient ground for appealing especially to visual images if the commodity was primarily a thing of sight. When the objects advertised are things primarily perceived by other senses than the eye, the greatest care should be taken to awaken those more difficult images, *i. e.*, those of sound, touch, taste, smell, etc. The man who is blind and deaf is greatly handicapped. He cannot perceive color or hear sound, and (if always blind and deaf) cannot imagine sights and sounds. The sense organs have been called the windows of the soul. The more sensations we receive from an object the better we know it. The function of the nervous system is to make us aware of the sights, sounds, feelings, tastes, etc., of the objects in our environment. The nervous system which does not respond to sound or to any other sensible qualities is defective. Advertisements are sometimes spoken of as the nervous system of the business

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world. That advertisement of musical instruments which contains nothing to awaken images

of sounds is a defective advertisement. That advertisement of foods which awakens no images of taste is a defective advertisement. As our

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nervous system is arranged to give us all the possible sensations from every object, so the advertisement which is comparable to the nervous system must awaken in the reader as many different kinds of images as the object itself can excite.

It might be well for a young man who expects to make a profession of writing advertisements to make a test of his own mental imagery. If he finds that he is peculiarly weak in visual imagery he should seek employment with a firm that handles goods other than those which are particularly objects of sight, *e. g.*, pictures. The man who cannot imagine how a musical instrument sounds should hesitate to write the advertisements of a musical house. The man who cannot imagine how foods taste will be greatly handicapped in attempting to write advertisements for food products. Forms of mental imagery may, to a limited extent, be cultivated, and, by giving special attention to the subject, one with a weak form of imagery may greatly improve upon his former efforts, in which he followed out his natural bent without considering the forms of mental images which could be appealed to by his particular class of goods.

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XV

CONCLUSION

In the first chapter of this volume it was asserted that there should be a theoretical basis for every important practical undertaking; that the leading advertisers were asking for some fundamental principles upon which a rational theory of advertising could be constructed; and that psychology alone seemed able to furnish such principles. In the succeeding chapters certain well-established facts of psychology were discussed and an attempt was made to show the bearing of such psychological facts upon the work of the practical advertiser. To appreciate their importance it is but necessary to recall to mind some of the more important features which were presented in each of these chapters, and to review them rapidly one after the other.

One of the greatest problems of the advertiser is how to attract the attention of possible customers. The second chapter presents six fundamental rules for attracting attention, and shows how they may be applied in the preparation of "copy" and in the placing of advertisements.

Naturally, every advertiser seeks to get his particular brand or "make" of goods firmly associated with the general class of goods of which they are a part. Thus one firm which manu-

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factures photographical apparatus has attempted to get the public to associate the idea of portable cameras with the name of its own make of portable camera (the " Kodak ") so firmly that they should think of this name whenever they think of portable cameras. The third chapter gives the accepted psychological laws for the forming of such associations, and illustrates their application in forming associations in the minds of those to whom certain advertisements were intended to appeal.

Every advertiser is searching for the easiest method of securing the desired action on the part of the public. In Chapters IV, V, and VI this question has been discussed and methods suggested for securing such action with the least possible resistance. Advertisements have been reproduced which were constructed according to these methods and which have met with unusual success.

The advertiser must consider the relative value of different media, of different " make-ups," and of different styles of illustration. The seventh chapter presented some important principles bearing upon these questions, and showed reproductions of advertisements which were weakened by disregarding these principles.

It is frequently desirable to test an advertisement in some more satisfactory manner than is possible by means of any " keying " device

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yet discovered. In the eighth chapter has been shown how certain features of an advertisement may be tested accurately without delay or expense. This chapter presents and illustrates the scientific experimental method of investigation.

The success of an advertisement depends, among other things, upon the wise choice of type, illustrations, and other symbols. Chapter IX presented some fundamental considerations on such choice and illustrated these principles by means of reproductions of good and of poor advertisements.

Most successful advertisement writers have discovered, after costly experience, that there are certain things which it is unwise to attempt. Of these things one is to attempt to move the mind of the public suddenly; another is to attempt to crowd many things into a single advertisement; and another is to describe goods in technical terms, or terms that are not understood by many who might be induced to become purchasers. In Chapter X was shown the necessity for a prolonged advertising campaign; for concentration; and for an appreciative acquaintance with the public to which the appeal is made as well as the folly of talking over the head of the average customer.

The inexperienced writer is liable to make his advertisement unclear and ambiguous at certain points. Chapters XI and XII have shown some

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of the causes for such mistakes as well as the need for methods of avoiding them. Numerous illustrations show some of the typical illusions with which the advertiser should be familiar.

In influencing the mind of another it is of importance to know in what terms he is thinking, so that the construction of the argument may be best adapted to his particular mental processes, for in this way he can be most easily influenced. This is a point to which the average advertiser gives little or no heed, as is shown by an examination of current advertisements. Chapter XIII has presented the subject of the terms in which we think under the general heading of *Mental Imagery*. Continuing this line of thought, Chapter XIV has shown how the advertiser may profitably make use of this knowledge in choosing the line of argument which will best describe his commodity and which will most easily influence his customers.

Thus it will be seen that in each of the preceding chapters some scientific principle has been presented and the necessary relationship between the principle and successful advertising has been illustrated. With all this evidence before us it would seem that we must admit that the practical nature of psychology in this connection has been demonstrated and that it has proved itself to be sufficient to meet the demands for a scientific basis for the theory of

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advertising. The understanding of the minds of possible customers as well as the discovering of the best methods of presenting the goods, preparing the copy, selecting media, and placing the advertisement to influence most effectively the minds of these same persons—all this practical ability is conditioned by a working knowledge of psychology. The successful advertiser must be a psychologist. It may not be necessary for him to be able to formulate his system and he may never have studied in any school or under any instructor other than his practical experience. No matter how he acquires his knowledge of psychology, he must, at least, possess it.

If this little book shall assist business men to any extent in acquiring this necessary knowledge, or shall prove an incentive to further researches which shall throw more light upon the true principles of a most important part of all modern business, the author feels that it will have accomplished its mission by adding its mite to the spread of science and to the advancement of industry.

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